County of Monterey
State of California

NOTICE OF DETERMINATION

FILED
SEP 0 3 2003
STEPHEN L. VAGNINI
MONTEREY COUNTY CLERK
DEPUTY

2003041

Project Title: NATURE CONSERVANCY THE ET AL
File Number: PLN010504
Owner: NATURE CONSERVANCY THE ET AL
PO BOX 1731
SALINAS CA 93902
Project Location: AZEVEDO MARSHES WEST OF ELKHORN RD &
Primary APN: 181-011-002-000
Project Planner: CARL HOLM
Permit Type: COASTAL DEVELOPMENT PERMIT
Final Approval Date: August 27, 2003
Project Description: COASTAL DEVELOPMENT PERMIT TO REPAIR THREE EXISTING TIDE GATES LEADING TO CULVERTS UNDER A UNION PACIFIC RAILROAD LINE, LOCATED IN THE AZEVEDO MARSHES WEST OF ELKHORN ROAD AND NORTH OF KIRBY PARK (ASSESSOR'S PARCEL NUMBER 181-011-002-000), ELKHORN SLOUGH, NORTH COUNTY, COASTAL ZONE.

THE MONTEREY COUNTY PLANNING COMMISSION HAS DETERMINED THAT THIS PROJECT, AS CONDITIONED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.

A Negative Declaration or Mitigated Negative Declaration has been prepared for this project pursuant to the provisions of the California Environmental Quality Act.

Further information, including a copy of the Negative Declaration or Mitigated Negative Declaration are available at the Monterey County Planning & Building Inspection Department, Room 116, Monterey County Courthouse, 240 Church Street, Salinas, CA (831) 755-5025

■ NEGATIVE DECLARATION
$1,250.00 (Two Hundred Fifty Dollars)-State Filing Fee
$25.00 (Twenty Five Dollars)- County Clerk fee
TOTAL FEE $1,275.00 Twelve Hundred Seventy Five Dollars)

☐ NO FEE-DE[illegible] EXCEPTION
$25.00 (Twenty Five Dollars)- County Clerk fee
Certificate of Exemption Filed

Public Resources Code Section 21152(a) requires local agencies to submit the information contained in this notice to the County Clerk. The filing of this notice starts a 30-day statute of limitations on court challenges to the approval of the project under Public Resources Code Section 21167. Failure to file this notice results in the statute of limitations being extended to 180 days.

Monterey County Planning Commission

Meeting: August 27, 2003, 9:25 am	**Agenda Item**: 2
Project Description: Coastal Development Permit (**PLN010504/Nature Conservancy-Azevedo Marshes**) to repair three existing tide gates leading to culverts under a Union Pacific Railroad line.	
Address and Parcel Number: The property is located in the Azevedo marshes west of Elkhorn Road and north of Kirby Park. APN: 181-011-002-000.	
Plan Area: North County, Coastal Zone	**Flagged and staked:** No
Zoning Designation: Agricultural Conservation (AC)/Resource Conservation (RC), Coastal Zone (CZ)	
CEQA Action: Negative Declaration	
Date application deemed complete: May 20, 2003	
Department: Planning and Building Inspection	

RECOMMENDATION: Staff recommends that the Planning Commission approve PLN010504/Nature Conservancy-Azevedo Marshes as described above based on Findings and Evidence **(Exhibit B)** and subject to proposed conditions **(Exhibit C)**.

OVERVIEW: The Elkhorn Slough Foundation is requesting approval of a Coastal Development Permit to repair three (3) existing tide gates in two ponds (marshes) leading to culverts under a Union Pacific Railroad (UPRR) line. This project is identified as one of the projects of the Elkhorn Slough Wetland Management Plan adopted by the County of Monterey in 1989. These three gates are considered necessary to maintain adequate tidal flow from the farmland into the slough and to prevent excessive tidal inundation that could increase the threat of salt water intrusion at the ranch property. Photos of the area and proposed plans are included as part of **Exhibits D and F**.

Each of the three culverts in the railroad embankment adjoining the work sites will be blocked during low tide with sandbags in order to prevent tidal water from entering the marshes while work is being performed on the tide gates. Residual water will be pumped into a temporary flexible pipe so that excess water at the work sites can be discharged into the slough. Repair of the southern tide gate includes hand-shoveling a 90-foot long channel to remove approximately 10 cubic yards of sediment. A temporary coffer dam will need to be installed upstream of this work site to prevent marsh water from flowing into the work area as a new berm is being built. This dam will be completely removed upon project completion.

Staff prepared and circulated an initial study to assess potential environmental impacts. Temporary impacts will occur by blocking tidal flows while work is being performed. These repairs will take place during the summer months when the rainfall and surface drainage is not accumulating in the marshes. This project will benefit existing agricultural operations on the property by removing the threat of salt water intrusion caused by uncontrolled tidal flows into the marshes. Staff finds that the project design along with the long-term benefits of the project reduces potential impacts to a less than significant level; and therefore, a Negative Declaration has been prepared.

OTHER AGENCY INVOLVEMENT: The following agencies have reviewed the project and those that are checked ("✓") have recommended conditions:

	Water Resources Agency
	Environmental Health Division
	Public Works Department
	North County Fire District
	Parks Department
	North County Coastal LUAC

There were no conditions presented from any of the reviewing agencies. The proposed project was reviewed by the North County Coastal Land Use Advisory Committee on May 19, 2003. This Committee recommended approval of the project with a 7-0 vote (**Exhibit E**).

This report was prepared by:

Carl P. Holm, AICP, Senior Planner
831-883-7593/holmcp@co.monterey.ca.us

This report reviewed by Jeff Main, AICP, Planning Services Manager

cc. Planning Commission, Supervisor Calcagno, County Counsel; Environmental Health; Public Works; Water Resources Agency; North County Fire District; Dale Ellis; Jeff Main; Carl Holm, Kay Barrett; Owner; Applicant; Representative; Planning File.

Attachments:

Exhibit "A"	Project Data Report
Exhibit "B"	Recommended Findings and Evidence
Exhibit "C"	Recommended Conditions
Exhibit "D"	Negative Declaration (7/16/03)
Exhibit "E"	LUAC Minutes
Exhibit "F"	Project Plans

Note:
1) This project may be appealed to the Board of Supervisors and the California Coastal Commission.
2) Final Monterey County decision required by November 20, 2003

MONTEREY COUNTY

PLANNING & BUILDING INSPECTION DEPARTMENT
PO BOX 1208 SALINAS, CA 93902
(831) 755-5025 FAX: (831)755-5487

NOTICE OF INTENT TO ADOPT A NEGATIVE DECLARATION MONTEREY COUNTY PLANNING COMMISSION

NOTICE IS HEREBY GIVEN that the Monterey County Planning and Building Inspection Department has prepared a draft Negative Declaration, pursuant to the requirements of the California Environmental Quality Act (CEQA), for a Coastal Development Permit (Azevedo Tide Gates, File Number PLN010504) at Azevedo Ranch, Elkhorn Road, Royal Oaks Area (assessor's parcel number 181-011-002-000) (see description below). The Negative Declaration and Initial Study, as well as referenced documents, are available for review at the Monterey County Planning and Building Inspection Department, Coastal Office, 2620 1st Avenue, Marina and the Monterey County Clerk's Office, 240 Church Street, West Wing, Third Floor, Room 305, Salinas. The Planning Commission will consider this proposal at a meeting on **August 27, 2003** in the Monterey County Board of Supervisors Chambers, 240 Church Street, Salinas, California. Written comments on this Negative Declaration will be accepted from **July 18, 2003 to August 20, 2003**. Comments can also be made during the public hearing.

Project Description: Coastal Development Permit to repair three existing tide gates leading to culverts under a Union Pacific Railroad line, located in the Azevedo Marshes west of Elkhorn Road and north of Kirby Park (assessor's parcel number 181-011-002-000), Elkhorn Slough, North County, Coastal Zone.

FOR ADDITIONAL INFORMATION CONTACT:
Carl P. Holm, AICP, Project Planner
Monterey County Planning & Building Inspection Department
2620 1st Avenue
Marina, CA 93933
(831) 883-7593

For reviewing agencies: The Planning and Building Inspection Department requests that you review the enclosed materials and provide any appropriate comments related to your agency's area of responsibility. The space below may be used to indicate that your agency has no comments or to state brief comments. In compliance with Section 15097 of the CEQA Guidelines, please provide a draft mitigation monitoring or reporting program for mitigation measures proposed by your agency. This program should include specific performance objectives for mitigation measures identified (CEQA Section 21081.6(c)). Also inform this Department if a fee needs to be collected in order to fund the mitigation monitoring or reporting by your agency and how that language should be incorporated into the mitigation measure.

Distribution: (see below)

____ No Comments provided
____ Comments noted below
____ Comments provided in separate letter

COMMENTS: _____

_____

_____

_____

Return to: Carl P. Holm, AICP, Senior Planner
Monterey County Planning and Building Inspection Department
2620 1st Avenue
Marina, CA 93933

From: Agency Name: _____
Contact Person: _____
Phone Number: _____

DISTRIBUTION

1. State Clearinghouse (10 copies)—include Notice of Completion
2. Monterey County Clerk's Office
3. California Coastal Commission
4. U.S. Army Corp of Engineers
5. California Department of Fish and Game
6. Union Pacific Railroad
7. Environmental Protection Agency
8. U.S. Army Corp of Engineers
9. Monterey Bay National Marine Sanctuary
10. School District
11. Pacific Gas & Electric
12. Pacific Bell
13. North County Fire
14. Monterey County Environmental Health Division
15. Monterey County Water Resources Agency
16. Monterey County Parks Department
17. Monterey County Public Works Department
18. Elkhorn Slough Foundation (Mark Silberstein)
19. Cypress Environmental and Land Use Planning (Kim Tschantz)

MONTEREY COUNTY

PLANNING & BUILDING INSPECTION DEPARTMENT
PO BOX 1208 SALINAS, CA 93902
PHONE: (831) 755-5025 FAX: (831) 755-5487

INITIAL STUDY

I. BACKGROUND INFORMATION

Project Title:	Azevedo Tide Gates
File No.:	PLN010504
Project Location:	Azevedo Marshes
Name of Property Owner:	Nature Conservancy plus Monterey County Agricultural and Historical Conservancy
Name of Applicant:	Mr. Kim Tschantz
Assessor's Parcel Number(s):	181-011-002-000
Acreage of Property:	135 Acres
General Plan Designation:	Agricultural Conservation/Wetlands and Costal Strand, North County Coastal Land Use Plan, Local Coastal Program
Zoning District:	AC(CZ) and RC(CZ) Agricultural Conservation and Resource Conservation (Coastal Zone)
Lead Agency:	Monterey County Planning and Building Inspection Department
Prepared By:	Carl P. Holm, AICP, Senior Planner
Date Prepared:	July 16, 2003
Contact Person:	Carl P. Holm, AICP
Phone Number/E-mail:	831-883-7593/holmcp@co.monterey.ca.us

II. DESCRIPTION OF PROJECT AND ENVIRONMENTAL SETTING

Background. In 1987 several public agencies signed a memorandum of understanding (MOU) and mitigation agreement to compensate for wetland biotic impacts that occurred when the Upper Santa Cruz Yacht Harbor was constructed in 1972. Signatories to that agreement include the California Coastal Commission, California Coastal Conservancy, California Department of Fish and Game and the Santa Cruz Port (Harbor) District. Although not a formal signatory, the U.S. Fish and Wildlife Service was a party to the MOU negotiations and is recognized in the agreement as a fifth agency whose approval is required for any further actions under the agreement.

The Elkhorn Slough Wetland Management Plan was adopted by the Monterey County Board of Supervisors in December 1988 as part of the North County Land Use Plan. This Management Plan includes a prescription for the restoration of the Azevedo marshes. The County's evaluation of the Management Plan in 1988 included preparation of an Initial Study/Negative Declaration pursuant to CEQA.

This Management Plan identified the need for tide gates in certain areas to restore sufficient tidal flow into areas that are blocked by natural flows. In the subject area, a railroad line created a berm with limited culverts that restrict tidal flow. As a result, the north and south marshes of the subject property presently experience excessive amounts of water with high salinity content for long periods of time. This condition has increased over recent years. Repairing the tide gates would allow more fresh water to be retained in the marshes in the rainy months, thus significantly diluting the saline content of the marshes.

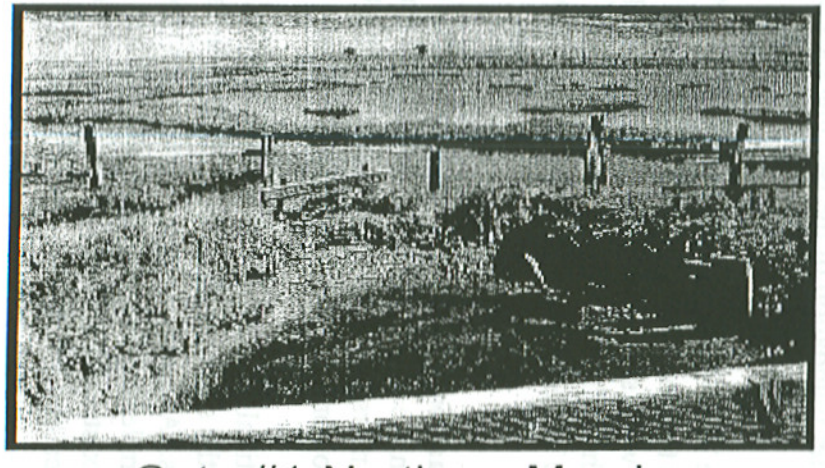
Project Description. The Elkhorn Slough Foundation is requesting approval of a Coastal Development Permit to repair three (3) existing tide gates in two ponds (marshes) leading to culverts under a Union Pacific Railroad (UPRR) line (see Figure 1 – next page). These three gates are considered necessary to maintain adequate tidal flow from the farmland into the slough and to prevent excessive tidal inundation that could increase the threat of salt water intrusion at the ranch property.

Three (3) tide gates would be repaired using earth material armored with rock and native vegetation. Two (2) semi-circle-shaped berms at the northern pond will be reconstructed with a maximum height of five (5) feet. The berm at this pond's southern inlet will need to be totally reconstructed. Most of the northern berm will be retained in the repair and retrofitting of that feature. A smaller berm at the southern pond's single inlet will be repaired and retrofitted. The total volume of fill material required to repair the berms is about 133 cubic yards. This project is identified as one of the projects of the Elkhorn Slough Wetland Management Plan adopted by the County of Monterey in 1989.

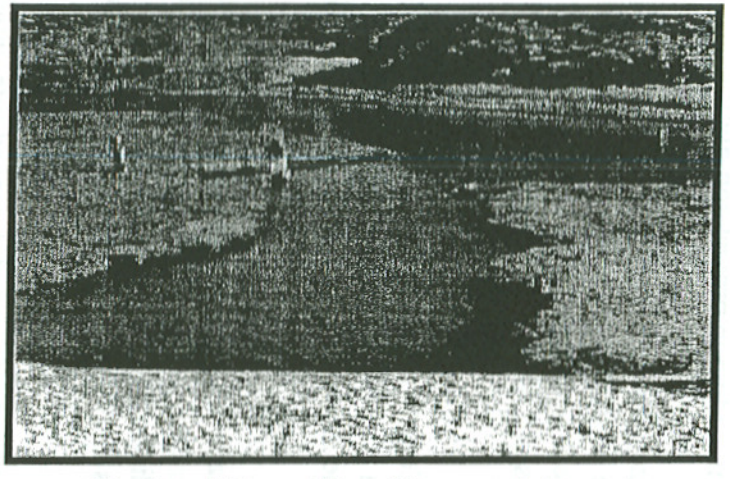
Each of the three culverts in the railroad embankment adjoining the three work sites will be blocked during low tide with sandbags in order to prevent tidal water from entering the marshes while work is being performed on the tide gates. Residual water will be pumped into a temporary flexible pipe so that excess water at the work sites can be discharged into the slough.

Azevedo Tide Gates

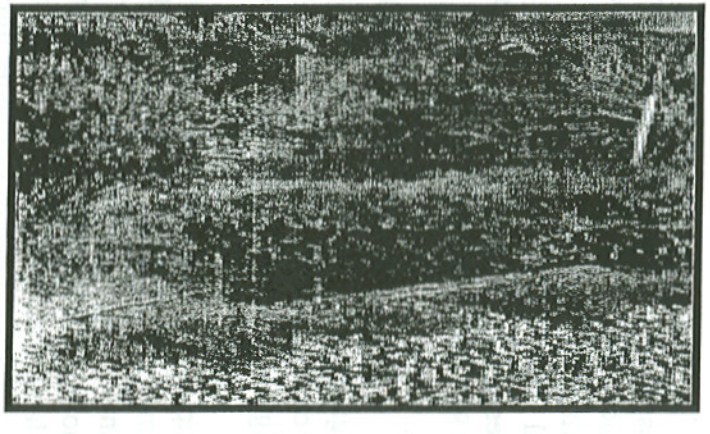
FIGURE 1



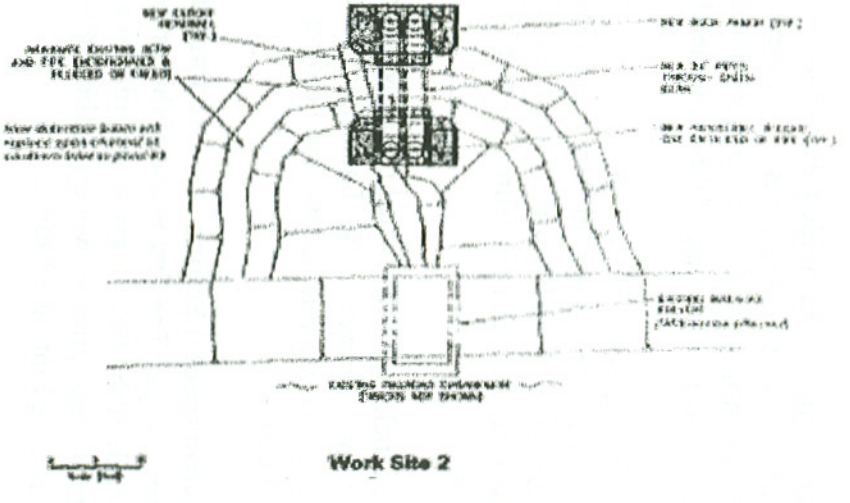
Gate #1-Northern Marsh



Gate #2 – Northern Marsh



Gate #3 – Southern Marsh



Work Site 2

Repair of the southern tide gate includes hand-shoveling a 90-foot long channel to remove approximately 10 cubic yards of sediment. A temporary coffer dam will need to be installed upstream of this work site to prevent marsh water from flowing into the work area as a new berm is being built. This dam will be completely removed upon project completion.

Site Description. The site is located on the Azevedo Ranch west of Elkhorn Road and north of Kirby Park. The Azevedo Ranch is a 135-acre property located between Elkhorn Road and the eastern edge of the Elkhorn Slough (See Figure 2 – next page). A raised embankment constructed to build the railroad in the 1870's separates the slough from three marshes on the ranch.

This ranch is jointly owned by the Monterey County Agricultural and Historical Conservancy and the Nature Conservancy. The Elkhorn Slough Foundation has been authorized by the Nature Conservancy to manage its land holdings at the ranch and therefore acts as the primary contact for the marsh.

Environmental Setting and Surrounding Land Uses: The Azevedo Ranch is actively farmed in row crops. The first phase of this project created a 100-foot agricultural setback from the edge of each of the three marshes in order to establish a vegetative filter buffer zone. This has allowed natural restoration of wetland habitat that was lost from previous agricultural activities that encroached into the habitat.

This project is that second phase, which involves the repair of damaged tide gates at two inlets of the northern marsh and a single inlet at the southern marsh. The repair work is needed to rectify severe tidal erosion and uncontrolled salt water inundation of the two marshes and threat of salt water intrusion at the ranch.

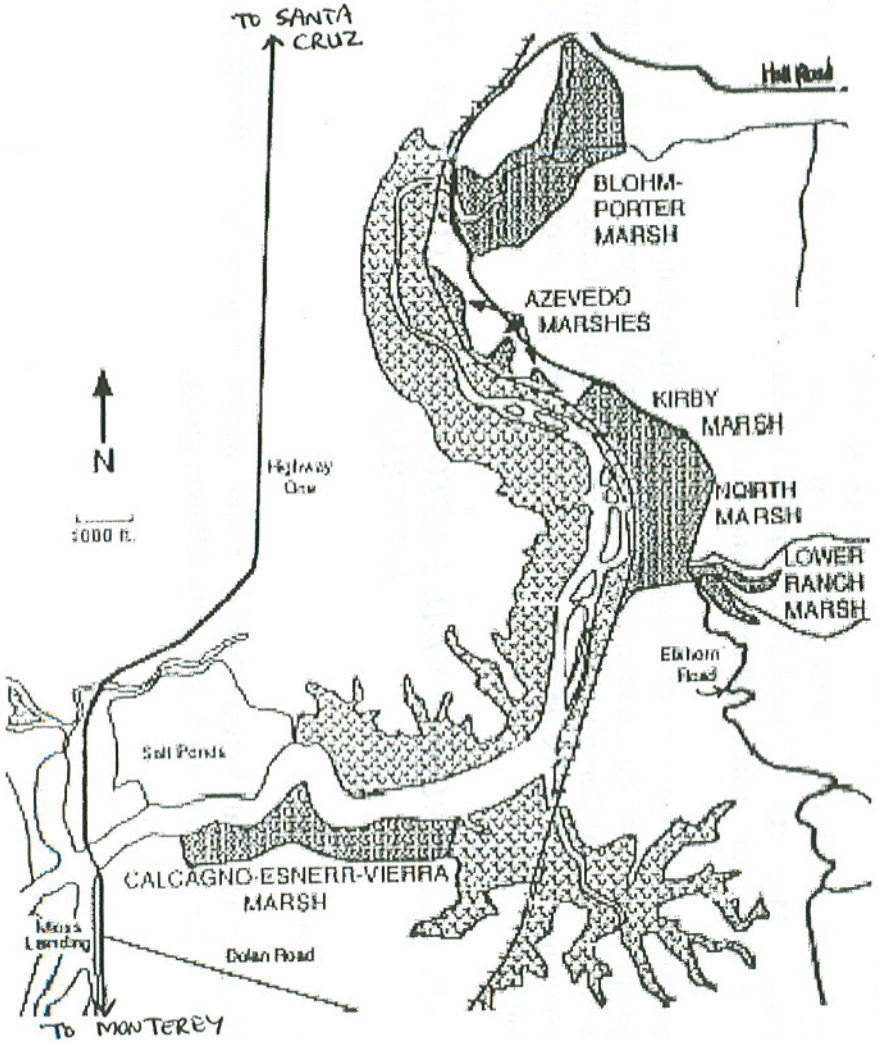
Access to the three work sites will be via the Union Pacific Railroad (UPRR). An application to UPRR for an Encroachment Permit requests temporary use of the tracks during times between scheduled train use to bring materials to the work sites and to allow permanent placement of small segments of the two largest berms in the UPRR right-of-way. Both "legs" of the two horseshoe shaped berms will extend into the UPRR right-of-way about 2 feet to abut the existing UPRR embankment.

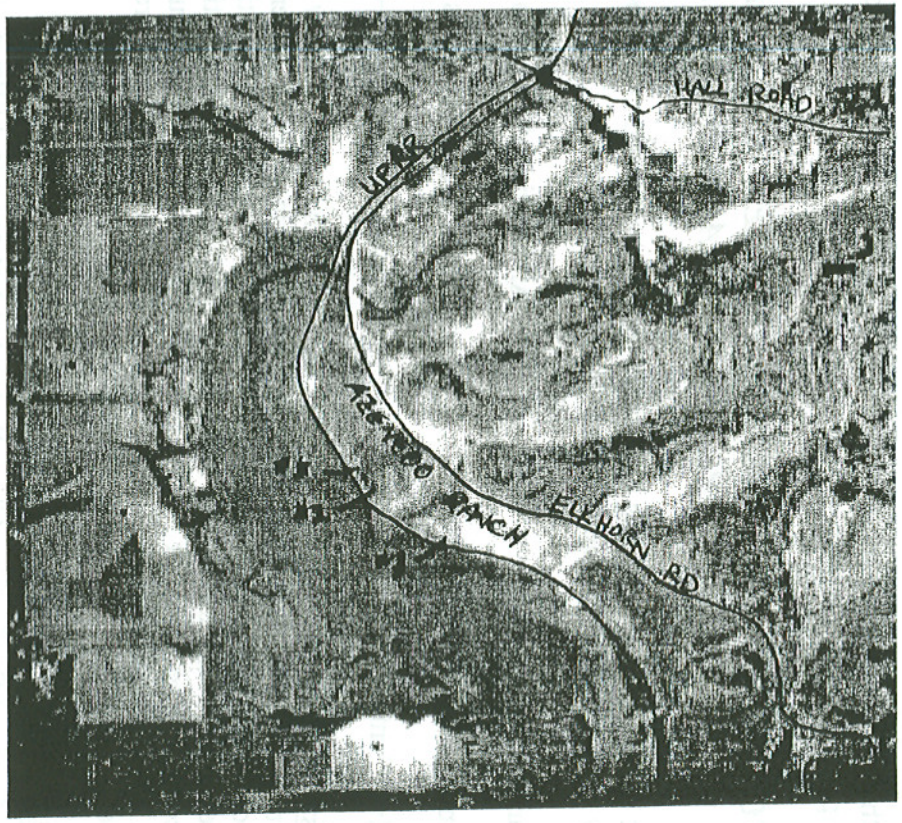
A. Summary of Environmental Evaluation. Implementation of this project is designed to mitigate for the loss of wetland habitat when the upper portion of the Santa Cruz Yacht Harbor was constructed in the 1972. The Azevedo marshes were selected by the signatories of the Mitigation Agreement as the best location to compensate for the habitat loss at the yacht harbor.

Temporary impacts will occur by blocking tidal flows while work is being performed. Therefore, the proposed repairs will take place during the summer months when the rainfall and surface drainage is not accumulating in the marshes. About 300 square feet of pickleweed will be removed. Mitigation for this work was completed in Phase I with the addition of 4.5 acres of wetland habitat. This project will benefit existing agricultural operations on the property by removing the threat of salt water intrusion caused by uncontrolled tidal flows into the marshes.

Vicinity Map

FIGURE 2





Staff finds that the project design along with the long-term benefits of the project reduce potential impacts to a less than significant level.

III. PROJECT CONSISTENCY WITH OTHER APPLICABLE LOCAL AND STATE PLANS AND MANDATED LAWS

Use the list below to indicate plans applicable to the project and verify their consistency or non-consistency with project implementation.

General Plan/Area Plan	☐	Air Quality Mgmt. Plan	☐
Specific Plan	☐	Airport Land Use Plans	☐
Water Quality Control Plan	☐	Local Coastal Program-LUP	☑

Local Coastal Program-LUP: The project is located in the North County Land Use Plan - Local Coastal Program and is designated for both Agricultural Conservation and Resource Conservation (AC/RC) land use. This plan provides for limited compatible wetland uses. The plan also recognizes that inadequate tide gates can result in insufficient tidal flow, which in turn causes excessive production of mosquitoes and decreased wildlife value of the area (NCLUP Policy 2.4.3.3). The proposed includes repair of three tide gates to address these environmental concerns. **CONSISTENT.**

Permits are needed from the following entities.
U.S. Army Corps of Engineers – Clean Water Act Nationwide 27 Permit (Stream and Wetland Restoration Activities)
Regional Water Quality Control Board – Clean Water Act Section 401 Water Quality Certification
County of Monterey – Coastal Zone Permit and Grading Permit
Union Pacific Rail Road – Encroachment Permit

The California Department of Fish and Game has reviewed the project and visited the project sites in the field and determined that no CDFG permits or approvals will be required. The California Coastal Commission reviewed their jurisdictional maps and has determined that the County has Coastal Zone permitting authority over the portion of the Coastal Zone where the project is located.

IV. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

A. FACTORS

The environmental factors checked below would be potentially affected by this project, as discussed within the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☑ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards/Hazardous Materials	☑ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems		

Some proposed applications that are not exempt from CEQA review may have little or no potential for adverse environmental impact related to most of the topics in the Environmental Checklist; and/or potential impacts may involve only a few limited subject areas. These types of projects are generally minor in scope, located in a non-sensitive environment, and are easily identifiable and without public controversy. For the environmental issue areas where there is no potential for significant environmental impact (and not checked above), the following finding can be made using the project description, environmental setting, or other information as supporting evidence.

☐ Check here if this finding is not applicable

FINDING: For the above referenced topics that are not checked off, there is no potential for significant environmental impact to occur from either construction, operation or maintenance of the proposed project and no further discussion in the Environmental Checklist is necessary.

EVIDENCE:

Aesthetics: The project area is on the east side of the railroad berm and is not visible from the slough area. In addition, the topography of the ranch make it so that the work area is generally not visible from Elkhorn Slough Road. Therefore, there is no potential impact on aesthetics resources. *(Project Description - Exhibit A)*

Agricultural: There are crops located on the higher elevations of the ranch, but there are no crops within the wetland area. The project would not convert prime farmland or otherwise conflict with agricultural zoning or uses. To the contrary, it serves to help enhance the farmland in this area. Therefore, there is no potential impact on agricultural resources. *(Project Description - Exhibit A)*

Air Quality: Construction activities will create short-term impacts. Biological impacts associated with grading can be mitigated through standard construction mitigation identified in the Air Quality Management Plan and are addressed in this section. *(Air Quality Management Plan)*

Hazards: There are no known hazards or hazardous materials associated with this project, so there is no potential impact. *(Project Description - Exhibit A)*

Land Use/Planning: The proposed project is consistent with policies of the North County Land Use Plan and the Elkhorn Slough Wetland Management Plan. *(North County Land Use Plan)*

Mineral Resources: A Geologic Investigation submitted for the proposed project does not identify any mineral resources. *(Project Description - Exhibit A)*.

Noise: There is no potential impact based on codified limitations on hours of work for construction operations. The completed project will not produce new noise impacts. *(Monterey County Codes)*

Population/Housing: The project involves repair to a facility in a wetland area. No homes will be affected by the proposed project. *(North County Land Use Plan)*

Services: There are no services required for the implementation or maintenance of this project. *(Project Description - Exhibit A)*.

Recreation: The Elkhorn Slough provides a type of passive recreation opportunity. The proposed project will enhance the environmental conditions in this area. *(Project Description - Exhibit A)*.

Transportation: The project abuts a levee that supports lines for the Union Pacific Railroad. This project has been designed to avoid any work near the levees that may affect the use or maintenance of these lines. *(North County Land Use Plan, Project Description - Exhibit A)*.

Utilities: There are no utilities required for this project. *(Project Description - Exhibit A)*.

B. DETERMINATION

On the basis of this initial evaluation:

☑ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	July 16, 2003 Date
Carl P. Holm, AICP Printed Name	Senior Planner Title

V. EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on project-specific screening analysis).

2) All answers must take into account the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

a) Earlier Analysis Used. Identify and state where they are available for review.
b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) The explanation of each issue should identify:

a) The significance criteria or threshold, if any, used to evaluate each question; and
b) The mitigation measure identified, if any, to reduce the impact to less than significance.

VI. ENVIRONMENTAL CHECKLIST

1. AESTHETICS Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista? (Source:)	☐	☐	☐	☑
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (Source: 1,3,4,6,11)	☐	☐	☐	☑
c) Substantially degrade the existing visual character or quality of the site and its surroundings? (Source: 1,3,4,6)	☐	☐	☐	☑
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Source: 1)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS: See Sections II and IV

2. AGRICULTURAL RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? (Source: 1,2,3,4)	☐	☐	☐	☑
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? (Source: 1,2,3,4)	☐	☐	☐	☑
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? (Source: 1,2,3,4)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan? (Source: 1,5)	☐	☐	☐	☑
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (Source: 1,5)	☐	☐	☐	☑
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? (Source: 1,5)	☐	☐	☐	☑

3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in significant construction-related air quality impacts? (Source: 1,5)	☐	☐	☐	☑
e) Expose sensitive receptors to substantial pollutant concentrations? (Source: 1,2,5)	☐	☐	☐	☑
f) Create objectionable odors affecting a substantial number of people? (Source: 1)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

4. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (Source: 1,7,11)	☐	☐	☐	☑
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? (Source: 1,7)	☐	☐	☑	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (Source: 1,7)	☐	☐	☑	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (Source: 1,7)	☐	☐	☑	☐

4. BIOLOGICAL RESOURCES Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (Source: 1,2,3,4)	☐	☐	☑	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (Source: 3,4,7)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS: Several years prior to the current owners gaining ownership of the ranch, semi-circular earthen berms were installed at the three subject inlets to minimize the amount of tidal inflow that inundated the northern and southern marsh and to reduce the velocity of the tidal current at each high tide and ebb tide event. Each berm had a culvert and flap gate installed through it to allow regulated drainage from the farm into the slough and to minimize the volume of tidal flow from the slough into the marshes. These structures have become damaged or have failed completely and no longer operate effectively. Their repair and replacement is necessary both to maintain adequate tidal flow from the farmland into the slough and to prevent excessive tidal inundation that could increase the threat of salt water intrusion at the ranch property.

The marshes are important habitat for waterfowl and aquatic organisms which provide a food source for various waterfowl. The project will substantially reduce the erosion and sedimentation of these wetlands by reducing the velocity of the tidal currents entering the marsh inlets. This will improve water quality and over time regain the shallower wetland habitat (e.g. mudflats) that has been lost by tidal current undercutting in the benthic environment. The project will allow an increase in the amount of fresh water contained in the two marshes. This will create greater habitat diversity for the area and potentially provide seasonal habitat for species that cannot currently reside in the slough due to its salinity (e.g. Red-legged frog, Tiger salamander).

In addition to repairing and retrofitting the berm at the southern marsh, a 90-foot long channel will be cleaned out by hand shoveling. This removal of accumulated silt will improve water flow at this location and enhance biological functionality. Approximately 10 cubic yards of sediment will be removed from this channel.

Pickleweed has colonized this channel due to it being filled with sediment. The project will remove approximately 300 square feet of pickleweed habitat. Phase I of the project mitigated this impact because it established an agricultural buffer that created 4.5 acres of wetland habitat. The areas disturbed by this project will also result in enhanced/increased wetland habitat as a result of the proposed project.

CONCLUSION: The proposed project is designed to repair tide gates in order to improve biological condition in this area. *Impacts created by the project are considered less than significant and no mitigation is required.*

5. CULTURAL RESOURCES Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5? (Source: 1, 3,4,8)	☐	☐	☐	☑
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5? (Source: 3,4,8)	☐	☐	☐	☑
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Source: 8)	☐	☐	☐	☑
d) Disturb any human remains, including those interred outside of formal cemeteries? (Source: 3,4,8)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

6. GEOLOGY AND SOILS Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Source: 3,4,9,10) Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
ii) Strong, seismic ground shaking? (Source: 3,4,9,10)	☐	☐	☐	☑
iii) Seismic-related ground failure, including liquefaction? (Source: 3,4,9,10)	☐	☐	☐	☑
iv) Landslides? (Source: 3,4,9,10)	☐	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil? (Source: 3,4,9,10)	☐	☐	☐	☑

6. GEOLOGY AND SOILS Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? (Source: 3,4,9,10)	☐	☐	☐	☑
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (Source:9,10)	☐	☐	☐	☑
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? (Source: 9,10)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

7. HAZARDS AND HAZARDOUS MATERIALS Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Source: 1,9)	☐	☐	☐	☑
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (Source: 1,9)	☐	☐	☐	☑
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Source: 12,3,4,9)	☐	☐	☐	☑
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (Source: 1,9)	☐	☐	☐	☑

7. HAZARDS AND HAZARDOUS MATERIALS Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (Source: 1,2,3)	☐	☐	☐	☑
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (Source:1,2,3)	☐	☐	☐	☑
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (Source: 1,2,3,4)	☐	☐	☐	☑
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (Source: 1,2,3,4,9)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

8. HYDROLOGY AND WATER QUALITY Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements? (Source: 1,9)	☐	☐	☐	☑
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? (Source: 1,9)	☐	☐	☐	☑
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? (Source: 1,9)	☐	☐	☑	☐

8. HYDROLOGY AND WATER QUALITY **Would the project:**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (Source: 1,3,4,9)	☐	☐	☑	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? (Source: 1,9)	☐	☐	☐	☑
f) Otherwise substantially degrade water quality? (Source: 1)	☐	☐	☐	☑
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (Source: 9)	☐	☐	☐	☑
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (Source: 9)	☐	☐	☐	☑
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? (Source: 9)	☐	☐	☐	☑
j) Inundation by seiche, tsunami, or mudflow? (Source: 9)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS: The north and south marshes presently experience excessive amounts of water with high salinity content for long periods of time from incoming tides from Elkhorn Slough Estuary via the Monterey Bay. This condition has increased over recent years and will increase further in the future if no measures are taken to counteract it. Percolation of only this saline water into the aquifer will increase the threat of salt water intrusion at the ranch. This project will allow more fresh water from rainfall and runoff to be retained in the marshes in the rainy months, thus significantly diluting the saline content of the marshes caused by tidal inflows.

The surface of each berm will be stabilized with large rock armoring to withstand tidal erosion over the long-term. This will also allow for vegetative planting in the crevices between the rocks. Over time the growth of vegetation will mask the appearance of the rock and help stabilize the berm. This design is consistent with the area so that the final product will blend into its surroundings.

Project construction work is proposed to occur during the summer when rainfall and surface drainage water is no longer accumulating in the marshes. However, tidal water will need to be temporarily diverted from the three work sites to provide a semi-dry area for construction to occur. The existence of the railroad embankment greatly facilitates any temporary water diversion at these sites. Therefore, any potential impact is considered to be less than significant.

Each of the three culverts in the railroad embankment adjoining the three work sites will be blocked during low tide with sandbags. This will prevent tidal water from entering the marshes when the tides rise again. Residual water at the work sites will be pumped into a temporary flexible pipe that will be installed through the sand bags so excess water at the work sites can be discharged into the slough. Since this is the natural flow of this water, potential impacts are considered to be less than significant.

The southern inlet of the northern marsh will need supplemental water diversion measures, as this is now an open channel. A temporary coffer dam will be installed upstream of this work site to prevent marsh water from flowing into the work area as a new berm is being built. The coffer dam will be installed in addition to the other measures described above. The coffer dam will be completely removed upon project completion. This short-term impact would be minimal and considered to be less than significant due to the long-term benefit of the proposed work.

CONCLUSION: The proposed project is designed to repair tide gates in order to improve hydrological conditions in this area. *Impacts created by the project are considered less than significant and no mitigation is required.*

9. LAND USE AND PLANNING **Would the project:**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community? (Source: 3,4)	☐	☐	☐	☑
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? (Source: 3,4)	☐	☐	☐	☑
c) Conflict with any applicable habitat conservation plan or natural community conservation plan? (Source: 3,4)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

10. MINERAL RESOURCES Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (Source: 9)	☐	☐	☐	☑
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (Source: 9)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

11. NOISE Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Source: 1)	☐	☐	☐	☑
b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels? (Source: 1)	☐	☐	☐	☑
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (Source: 1)	☐	☐	☐	☑
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (Source: 1)	☐	☐	☐	☑
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (Source: 1,2,3,4)	☐	☐	☐	☑
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (Source: 1,2,3,4)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

12. POPULATION AND HOUSING Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (Source: 2,3,4)	☐	☐	☐	☑
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (Source: 2,3,4)	☐	☐	☐	☑
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (Source: 2,3)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

13. PUBLIC SERVICES Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection? (Source: 1)	☐	☐	☐	☑
b) Police protection? (Source: 1)	☐	☐	☐	☑
c) Schools? (Source: 1)	☐	☐	☐	☑
d) Parks? (Source: 1)	☐	☐	☐	☑
e) Other public facilities? (Source: 1)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

14. RECREATION Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (Source: 1,3,4)	☐	☐	☐	☑
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (Source: 1,3,4)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

15. TRANSPORTATION/TRAFFIC Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? (Source: 1,3)	☐	☐	☐	☑
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? (Source: 1)	☐	☐	☐	☑
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in a location, which results in substantial safety risks? (Source: 1)	☐	☐	☐	☑
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (Source: 1)	☐	☐	☐	☑
e) Result in inadequate emergency access? (Source: 1,3)	☐	☐	☐	☑
f) Result in inadequate parking capacity? (Source: 1)	☐	☐	☐	☑
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? (Source: 2,3,4)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

16. UTILITIES AND SERVICE SYSTEMS Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (Source: 2,3)	☐	☐	☐	☑
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Source: 2)	☐	☐	☐	☑
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Source: 1,2,3)	☐	☐	☐	☑
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (Source: 1,2,3)	☐	☐	☐	☑
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (Source: 1,2,3)	☐	☐	☐	☑
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? (Source: 1,2,3)	☐	☐	☐	☑
g) Comply with federal, state, and local statutes and regulations related to solid waste? (Source: 1,2,3)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS/CONCLUSION: See Sections II and IV

VII. MANDATORY FINDINGS OF SIGNIFICANCE

NOTE: If there are significant environmental impacts which cannot be mitigated and no feasible project alternatives are available, then complete the mandatory findings of significance and attach to this initial study as an appendix. This is the first step for starting the environmental impact report (EIR) process.

Does the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? (Source: 7,8)	☐	☐	☐	☑
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? (Source: 1,2,3)	☐	☐	☐	☑
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (Source: 7,8,9,10)	☐	☐	☐	☑

DISCUSSION/IMPACT ANALYSIS: The project will provide benefits in several areas regarding natural resource management. A meeting of the 1987 Agreement signatories was held on December 2, 2002 to review the conceptual plan at the three works sites. All meeting attendees agreed with the concept of the project as appropriate for the three sites at the two marshes on the Azevedo Ranch. The Elkhorn Slough Foundation (ESF) will be ready to implement the project in the summer 2003. All work can be completed in less than one month at all three project sites.

CONCLUSION: The proposed project is designed to repair tide gates in order to improve environmental conditions in this area. *Impacts created by the project are considered less than significant and no mitigation is required.*

VIII. FISH AND GAME ENVIRONMENTAL DOCUMENT FEES

Assessment of Fee: For purposes of implementing Section 735.5 of Title 14, California Code of Regulations: If based on the record as a whole, the Planner determines that implementation of the project described herein, will result in changes to resources A-G listed below, then a **Fish and Game Document Filing Fee** must be assessed. Based upon analysis using the criteria A-G, and information contained in the record, state conclusions with evidence below:

A) Riparian land, rivers, streams, water courses, and wetlands under state and federal jurisdiction.
B) Native and non-native plant life and the soil required to sustain habitat for fish and wildlife;
C) Rare and unique plant life and ecological communities dependent on plant life, and;
D) Listed threatened and endangered plant and animals and the habitat in which they are believed to reside.
E) All species of plant or animals listed as protected or identified for special management in the Fish and Game Code, the Public Resources Code, and the Water Code, or regulations adopted thereunder.
F) All marine terrestrial species subject to the jurisdiction of the Department of Fish and Game and the ecological communities in which they reside.
G) All air and water resources the degradation of which will individually or cumulatively result in the loss of biological diversity among plants and animals residing in air or water.

De minimis Fee Exemption: For purposes of implementing Section 735.5 of the California Code of Regulations: A *De Minimis Exemption* may be granted to the **Environmental Document Fee** if there is substantial evidence, based on the record as a whole, that there **will** be changes to the above named resources A-G caused by implementation of the project. Using the above criteria, state conclusions with evidence below, and follow Planning and Building Inspections Department Procedures for filing a de minimis exemption.

Conclusion: Repairing three tide gates will change the tidal flow for this wetland area. The project will be required to pay a fee of $1,275. Said fee must be submitted within five calendar days of final action on this project so that the required Notice of Determination may be filed in accordance with CEQA.

Evidence: State Department of Fish and Game will review the Mitigated Negative Declaration to comment and recommend necessary conditions to protect biological resources in this area.

IX. REFERENCES

1. Project Application/Plans. On file with Monterey County Planning and Building Inspection Department.
   A. PLN010504. Subject Application
2. North County Land Use Plan, Local Coastal Program. Adopted Monterey County Board of Supervisors April 28, 1982 and as amended. Certification acknowledged by the California Coastal Commission June 4, 1982.
3. Monterey County Coastal Implementation Plan, Part 2, Regulations for Development in the North County Land Use Plan (Chapter 20.144 MCC). Adopted Monterey County Board of Supervisors January 5, 1988 and as amended.

4. Azevedo Ranch Marshes Enhancement Project. Kim Tschantz, Cypress Environmental and Land Use Planning.

5. Elkhorn Slough Water Conservation Plan. The Elkhorn Slough Foundation and The Nature Conservancy, August 1999.

6. Elkhorn Slough Wetland Management Plan. ABA Consultants. December 1989.

7. Elkhorn Slough Watershed Project: Information for the California Coastal Commission. U.S. Department of Agriculture. January 7, 1997.

8. Elkhorn Slough Watershed Permit Coordination Program. USDA – Natural Resources Conservation Service and Elkhorn Slough Watershed Project. 1998 Implementation Report.

9. Wetland Assessment and Restoration Plan: Elkhorn Slough Foundation Parcel, Moss Landing, California. ABA Consultants. November 3, 1990.

10. Initial Study – Elkhorn Slough Watershed Project. USDA – Natural Resources Conservation Service.

11. Agriculture and Wetlands, Examining the Interface at the Azevedo Ranch and the Elkhorn Slough National Estuarine Research Reserve in Coastal Central California. October 1997.

12. Agriculture and Wetlands, Developing a Model System for Assessing the effects of Conversion to Sustainable Agriculture Practices in a Sensitive Estuarine Watershed, Elkhorn Slough, California. September 1993.

13. Enhancement Plan for the Azevedo Marshes; Hydrologic Elements. Robert Coats, PhD. March 1993.

14. Negative Declaration – Elkhorn Slough Wetlands Management Plan. County of Monterey. April 1988.

X. EXHIBITS

A. Azevedo Ranch Marshes Enhancement Project.

AZEVEDO RANCH MARSHES ENHANCEMENT PROJECT

A CONSERVATION PRACTICE PROPOSED BY THE ELKHORN SLOUGH FOUNDATION

INTRODUCTION

The Elkhorn Slough Foundation is requesting approval of a wetland enhancement project on the Azevedo Ranch. Permit applications have been made to three agencies and the Union Pacific Rail Road for this project. These agencies the permits needed are listed below. The goals of this project are:

1. To increase the area of wetland habitat;
2. To improve the quality of aquatic and wetland habitat;
3. Reduce the threat of salt water intrusion affecting the cultivated areas of the Azevedo Ranch; and
4. Reduce tidal erosion that is presently occurring at the property.

In summary, the portion of the project, for which permitting is needed, is the repair of water control structures at three inlets feeding two marshes on the ranch. This project is identified as one of the projects of the Elkhorn Slough Wetland Management Plan adopted by the County of Monterey in 1989. The project is discussed in more detail below.

BACKGROUND

In 1987 several public agencies signed an MOU and mitigation agreement (Attachment 1) to compensate for wetland biotic impacts that occurred when the Upper Santa Cruz Yacht Harbor was constructed in 1972. The signatories to that agreement are the California Coastal Commission, California Coastal Conservancy, California Department of Fish and Game and the Santa Cruz Port (Harbor) District. Although not a formal signatory, the U.S. Fish and Wildlife Service was a party to the MOU negotiations and is recognized in the agreement as a fifth agency whose approval is required for any further actions under the agreement. After a long selection process for an appropriate mitigation site, the marshes at the Azevedo Ranch were selected.

The ranch is jointly owned by the Monterey County Agricultural and Historical Conservancy and the Nature Conservancy. The Elkhorn Slough Foundation has been authorized by the Nature Conservancy to manage its land holdings at the ranch and therefore acts as the primary contact for the marsh mitigation sites. The Azevedo Ranch is a 135 acre property located between Elkhorn Road and the eastern edge of Elkhorn Slough (Attachment 2). A raised embankment constructed to build the railroad in the 1870's separates the slough from three marshes on the ranch. The ranch is actively farmed in row crops in a manner that minimizes impacts on the site's wetland habitat. The first phase of the project was creating a 100 foot agricultural setback from the edge of each of the three marshes and creating a vegetative filter buffer zone within this setback. This has allowed natural restoration of wetland habitat that was lost from previous agricultural activities that encroached into the habitat. Since 1992, 4.5 acres of

wetland habitat has been restored in this first phase of the project. The increase in wetland habitat is illustrated on the attached aerial photographs taken in 1992 and 2000 (Attachments 3 and 4).

The second phase involves the repair of damaged water control structures at the two inlets of the northern marsh and the single inlet at the southern marsh. No work would occur at the middle marsh. The repair work is needed to rectify severe tidal erosion and uncontrolled salt water inundation of the two marshes and threat of salt water intrusion at the ranch. This will allow continued increase of the area of wetland habitat gained by this project, as well as improve the water quality of the marshes by enhancing water circulation and decreasing salinity.

Several years prior to the current owners gaining ownership of the ranch, semi-circular earthen berms were installed at the three inlets described above to minimize the amount of tidal inflow that inundated the northern and southern marsh and to reduce the velocity of the tidal current at each high tide and ebb tide event. Each berm had a culvert and flap gate installed through it to allow regulated drainage and to minimize the volume of tidal flow into the marshes. Due to several factors, these structures have become damaged over the years or have failed completely and no longer operate effectively. Their repair and replacement is necessary both to maintain adequate tidal flow from the farmland into the slough and to prevent excessive tidal inundation that could increase the threat of salt water intrusion at the ranch property.

The Elkhorn Slough Wetland Management Plan was adopted by the Monterey County Board of Supervisors in December 1988 as part of the North County General Plan. The Management Plan includes a prescription for the restoration of the Azevedo marshes. The proposed project follows the methods specified in the Management Plan. A primary part of the County's evaluation of the Management Plan in 1988 was the preparation of an Initial Study pursuant to CEQA. A Negative Declaration was approved for the Management Plan in 1988. The California Coastal Conservancy will be providing supplemental funding for the project. In the State agency's judgment, the 1988 Negative Declaration is applicable to the current project and no further CEQA analysis is necessary.

EXISTING CONDITIONS

Each marsh inlet is located adjacent to a culvert installed through the Union Pacific Rail Road embankment. This allows tidal water to flow directly though the rail road's culvert and into each marsh. The northern inlet feeding the northern marsh is modified by a horseshoe-shaped earthen berm which funnels tidal water from the railroad culvert into the marsh (Attachment 5). The berm has become eroded and sediment has filled much of the funnel pond. As a result, this feature no longer restricts as much tidal water from entering the marsh as it was originally intended. The berm at the southern entrance of this same marsh was blown out during winter storms a few years ago and no longer exists. This inlet is now a 6-10 foot wide unregulated channel which experiences high velocity tidal currents during high and ebb tides (Attachment 6). The channel bottom has

been substantially undercut by this high velocity tidal flow. This erosion problem has extended in both directions farther into the marsh and through the tidal flats of the slough, thereby removing wetland habitat dependent on more shallow waters. The loss of the water control feature at this location has made the northern marsh fully tidal and it is now a conduit for salt water intrusion at the ranch. In addition, this unregulated flow is causing serious downstream downcutting, creating a dramatic chasm across the tidal flats of the slough and loss of habitat.

Tidal water regulation continues to be successful at the center marsh and no work is proposed at this wetland. The southern marsh, which is the smallest of the three, is fed with tidal water by a single inlet (Attachment 7). The old water control feature here is similar to that at the northern marsh's north inlet except smaller. It is also eroded. A silt filled channel measuring approximately 90 feet in length separates the damaged water control feature from the open water portion of this marsh.

Presently, there are no State or federally listed threatened or endangered species at the two marshes. Implementation of the project will allow greater control of tidal flow and seasonal retention of freshwater in the marshes, especially during winter months when the marshes can become filed in large part from direct rainfall and surface drainage. This may create habitat conducive to the California Red-legged frog (*Rana aurora draytonii*), a federally listed species that occurs in fresh water wetland habitat in the project vicinity.

DESCRIPTION OF THE PROJECT

Tidal water control features would be repaired at the most northern and southern inlets and totally rebuilt at the southern inlet to the north marsh using earth material armored with rock and native vegetation. Each berm would be equipped with 24 inch diameter CMP culverts and an adjustable weir. The installation of both culverts and weirs will allow greater versatility in management of tidal flows, should the management need to adapt to changing conditions over time. Each culvert will have flap gates installed at each opening. The type presently being considered, are float activated self-regulating flap gates (Attachment 8). Including flap gates on the culverts will allow tidal flushing of the marshes without over-inundation the wetlands and flooding (and erosion) of upland property. The flap gates will need solid structural support. This will also act to anchor the culverts to withstand movement over time from tidal currents. Concrete is believed to be the best material for this structure. Both wood and metal will deteriorate over time.

Plan views depicting the proposed work at each of the three project work sites are provided in Figures 1-3. This work is described as follows. The two semi-circle-shaped berms at the northern marsh will measure approximately 72 lineal feet with a maximum height of 5 feet. Only the berm at the marsh's southern inlet will need to be totally reconstructed. Most of the northern berm will be retained in the repair and retrofitting of that feature. The smaller berm at the southern pond's single inlet will be repaired and retrofitted to retain its current length of 7 feet. The surface of each berm will need to be stabilized to withstand tidal erosion over the long-term. Large rock armoring is proposed, as this form of armoring will use a natural material and allow for vegetative planting in

the crevices between the rocks. Over time the growth of vegetation will mask the appearance of the rock and help stabilize the berm. The total volume of fill material required to repair the berms is up to 133 cubic yards.

In addition to repairing and retrofitting the berm at the southern marsh, the 90 foot long channel will be cleaned out by hand shoveling. This removal of accumulated silt will improve water flow at this location and enhance biological functionality. Approximately 10 cubic yards of sediment will be removed from this channel. Pickleweed has colonized this channel due to it being filled with sediment. The loss of 300 square feet of pickleweed habitat has been more than compensated for with the 4.5 acre increase on wetland habitat that occurred in phase 1 of the project.

Access to the three work sites will be via the UPRR. An application to UPRR for an Encroachment Permit requests temporary use of the tracks during times between scheduled train use to bring materials to the work sites and to allow permanent placement of small segments of the two largest berms in the UPRR right-of-way. Both "legs" of the two horseshoe shaped berms will extend into the UPRR right-of-way about 2 feet to abut the existing UPRR embankment.

WATER DIVERSION

Project construction work is proposed to occur during the summer when rainfall and surface drainage water is no longer accumulating in the marshes. However, tidal water will need to be temporarily diverted from the three work sites to provide a semi-dry area for construction to occur. The existence of the railroad embankment greatly facilitates any temporary water diversion at these sites. Each of the three culverts in the railroad embankment adjoining the three work sites will be blocked during low tide with sandbags. This will prevent tidal water from entering the marshes when the tides rise again. Residual water at the work sites will be pumped into a temporary flexible pipe that will be installed through the sand bags so excess water at the work sites can be discharged into the slough. The southern inlet of the northern marsh will need supplemental water diversion measures, as this is now an open channel. A temporary coffer dam will need to be installed upstream of this work site to prevent marsh water from flowing into the work area as a new berm is being built. The coffer dam will be installed in addition to the other measures described above. The coffer dam will be completely removed upon project completion.

BENEFITS OF THE PROJECT

The County Agricultural and Historical Conservancy leases the upland portion of the ranch to two growers, Tom Amhrein and Jesus Rocha. These growers cultivate strawberries and other row crops in two separate agricultural businesses. While both growers employ traditional horticultural practices, the ranch land is managed as a model for the successful dual use of agricultural production and habitat protection. It is important that problems affecting the agricultural use of the ranch be remedied so it can continue to serve as a model for the local agricultural area. The project will benefit the

continued commercial agricultural operations on the property by removing the threat of salt water intrusion caused by uncontrolled tidal flows into the marshes. As previously discussed, the north and south marshes presently experience excessive amounts of water with high salinity content for long periods of time. This condition has increased over recent years and will increase further in the future if no measures are taken to counteract it. Percolation of only this saline water into the aquifer will increase the threat of salt water intrusion at the ranch. The project will allow more fresh water from rainfall and runoff to be retained in the marshes in the rainy months, thus significantly diluting the saline content of the marshes caused by tidal inflows.

The marshes are important habitat for waterfowl and aquatic organisms which provide a food source for various waterfowl. The project will substantially reduce the erosion and sedimentation of these wetlands by reducing the velocity of the tidal currents entering the marsh inlets. This will improve water quality and over time regain the shallower wetland habitat (e.g. mudflats) that has been lost by tidal current undercutting in the benthic environment. The project will allow an increase in the amount of fresh water contained in the two marshes. This will create greater habitat diversity for the area and potentially provide seasonal habitat for species that cannot reside in the slough due to its salinity (e.g. Red-legged frog, Tiger salamander).

Successful implementation of the project will mitigate for the loss of wetland habitat when the upper portion of the Santa Cruz Yacht Harbor was constructed in the 1972. The Azevedo marshes were selected by the signatories of the Mitigation Agreement as the best location to compensate for the habitat loss at the yacht harbor. This project will implement a mitigation measure that is long overdue.

PERMITS REQUIRED

Although this is a small project will provide substantial environmental benefit, permits are needed from the following entities.

Governmental Agencies

U.S. Army Corps of Engineers – Clean Water Act Nationwide 27 Permit (Stream and Wetland Restoration Activities)
Regional Water Quality Control Board – Clean Water Act Section 401 Water Quality Certification
County of Monterey – Coastal Zone Permit and Grading Permit

Non-governmental Agencies

Union Pacific Rail Road – Encroachment Permit

The California Department of Fish and Game have reviewed the project and visited the project sites in the field and determined that no CDFG permits or approvals will be required. The California Coastal Commission have reviewed their jurisdictional maps and

have determined that the County has Coastal Zone permitting authority over the portion of the Coastal Zone where the project is located.

CONCLUSION

The project will provide benefits in several areas regarding natural resource management. A meeting of the 1987 Agreement signatories was held on December 2, 2002 to review the conceptual plan at the three works sites. All meeting attendees agreed with the concept of the project as appropriate for the three sites at the two marshes on the Azevedo Ranch. The written summary of that meeting provides the main points discussed by meeting participants (Attachment 7). The ESF will be ready to implement the project in the summer 2003. All work can be completed in less than one month at all three project sites. Quick permit approvals for the project will allow the project to occur this summer and minimize costs to public agencies and the ESF who are funding the project.

Attachments:
1 – Mitigation Agreement
2 – Location Map of the Azevedo Ranch
3 – Delineation of Wetland Habitat and Buffer in 1992
4 – Delineation of Wetland Habitat and Buffer in 2000
5 – Photograph of the Existing Berm at the North Inlet to the Northern Marsh
6 – Photograph of the Existing Channel at the South Inlet to the Northern Marsh
7 – Photograph of the Existing Berm at the Southern Marsh
8 – Schematic of the Operation of Float-operated Flag Gates for the Culverts
9 – Summary of the Signatories Meeting of December 2, 2002

Site Plan Figures:
1 – Proposed Work at Worksite #1 (Corresponds to site shown in Attachment 7)
2 – Proposed Work at Worksite #2 (Corresponds to site shown in Attachment 6)
3 – Proposed Work at Worksite #3 (Corresponds to site shown in Attachment 5)

ATTACHMENT 1.

MEMORANDUM OF UNDERSTANDING AMONG THE PORT OF SANTA CRUZ THE CALIFORNIA COASTAL CONSERVANCY THE CALIFORNIA COASTAL COMMISSION, AND THE CALIFORNIA DEPARTMENT OF FISH AND GAME TO ESTABLISH A PROCEDURE FOR COMPENSATION OF WETLAND LOSSES INCURRED BY CONSTRUCTION OF THE WOODS LAGOON PORTION OF SANTA CRUZ HARBOR BY WETLAND HABITAT RESTORATION

THIS MEMORANDUM OF UNDERSTANDING (MOU) is entered into by the SANTA CRUZ PORT DISTRICT acting by and through its PORT DISTRICT COMMISSION ("PORT"), the STATE COASTAL CONSERVANCY ("SCC"), the CALIFORNIA COASTAL COMMISSION ("CCC"), and the CALIFORNIA DEPARTMENT OF FISH AND GAME ("DFG").

WHEREAS, the construction of the Woods Lagoon portion of the Santa Cruz Harbor in 1973 by the PORT (the "Harbor Project") destroyed estuarine habitat; and

WHEREAS, the PORT was requested by the U. S. Fish and Wildlife Service ("FWS") to mitigate the impacts of the Harbor Project by spending $50,000 to restore or enhance 3 acres of marsh or lagoon habitat in Santa Cruz County (the "Mitigation Requirement"), and the Port agreed to do so; and

WHEREAS, the certified City of Santa Cruz Land Use Plan, Policy C-4, requires that the PORT prepare and comply with a work program and schedule for completion of the Mitigation Requirement prior to issuance of coastal permits for any future Port District development; and

WHEREAS, the PORT, after a 14 year effort, has been unsuccessful in completing the Mitigation Requirement; and

WHEREAS, the PORT has offered to complete the Mitigation Requirement by placing $100,000 (the "Mitigation Funds") for restoration and enhancement of wetland habitat in an escrow account to be managed by the SCC; and

WHEREAS, the FWS, DFG, PORT and CCC have agreed that the SCC is the most appropriate agency to identify and undertake a project to meet the Mitigation Requirement; and

WHEREAS, pursuant to California Public Resources Code section 31000 et seq., the SCC is authorized to undertake projects for the enhancement of resource areas within the Coastal Zone of the State of California.

NOW THEREFORE, it is agreed that:

1. Within 30 days of the effective date of this MOU the Port and the SCC will establish, and the Port will deposit the Mitigation Funds into, an interest bearing escrow account under the control of the Conservancy and for the purposes and according to the procedures set forth below.

2. The SCC will use its best efforts to identify a project that

creates no less than three acres of new habitat as compensation for wetland losses incurred by the Harbor Project.

3. Once this project has been identified and approved by the signatories of this MOU, the SCC shall: a) prepare an enhancement plan; b) prepare plans, specifications, and engineering for the approved plan; and c) implement the project with the funds deposited in the escrow account. Funding for tasks A and B shall not exceed $20,000, and the SCC administrative expenses shall be reimbursed through the escrow account.

4. The SCC will identify a wetland enhancement project using the following priority:

a. restore or enhance tidal estuarine habitat within the City of Santa Cruz and as close to the PORT as possible;

b. restore or enhance tidal estuarine within Santa Cruz County;

c. restore or enhance tidal estuarine habitat within Monterey County;

d. restore or enhance freshwater habitat within Santa Cruz County.

The SCC will exhaust all reasonable options in each rank before exploring the next priority level.

5. The SCC may use the Mitigation Funds to complete a discrete project or may complete a larger project by combining other funds with the Mitigation Funds. If the Mitigation Funds are combined with other funds to complete a larger project, the SCC shall demonstrate that the PORT'S deposit has compensated for the three acre loss.

6. Prior to use of any Mitigation Funds, the SCC shall submit an enhancement project and concept plan to the Port, FWS, DFG, and the CCC for their review and approval. The SCC shall identify all funding sources necessary to complete the project at this time.

7. Approval by the aforementioned agencies of the enhancement project shall be deemed a certification that completion of the project will meet the Mitigation Requirement and that funds may be used to develop an enhancement plan for project implementation.

8. Following approval of the enhancement plan, the SCC shall prepare final engineering plans for the project. The Mitigation Funds may be used for this purpose. FWS, DFG, and the CCC shall review and approve the engineering plans for consistency with the enhancement plan. Upon approval of these plans, the SCC shall provide for construction of the enhancement project using the Mitigation Funds.

9. The signatories to this MOU agree to assist the SCC as necessary in locating, selecting, planning, and obtaining permits and approvals for a project that will meet the PORT'S Mitigation Requirement.

10. The SCC will make a reasonable effort to complete all phases of the project within 2 years of the effective date of this MOU, including preparation of the final engineering plans for the project.

11. Nothing herein shall be deemed to obligate any expenditure of the SCC's own funds.

THIS MEMORANDUM OF UNDERSTANDING SHALL BE IN FULL FORCE AND EFFECT FROM THE DATE WHICH ALL PARTICIPANTS HAVE SIGNIFIED AGREEMENT BY SIGNATURE OF THE DESIGNATED REPRESENTATIVE.

THE PORT OF SANTA CRUZ, acting by and through its Port District Commission.

By: Brian E. Foss — JAN 4 1987
Brian E. Foss — Date
Director

THE DEPARTMENT OF FISH AND GAME
The Resources Agency of California

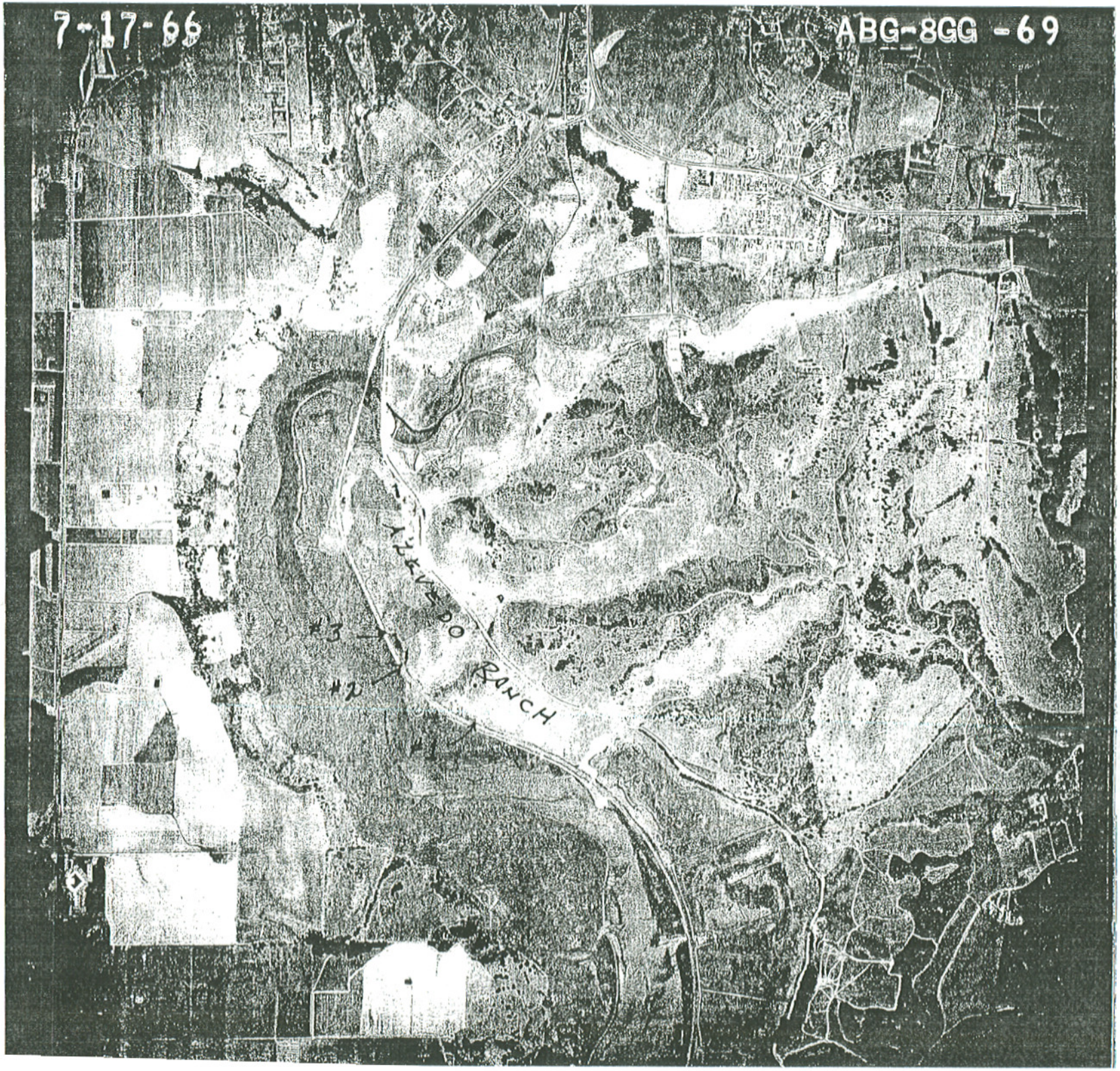
By: [signature] — March 16, 1987
J. C. Parnell — Date
Director

THE STATE COASTAL CONSERVANCY
The Resources Agency of California

By: _____ Dec 24, 1986
Peter Grenell Date
Executive Officer

THE CALIFORNIA COASTAL COMMISSION
The Resources Agency of California

By: _____ Jan. 13, 1987
Peter Douglas Date
Director


7-17-66
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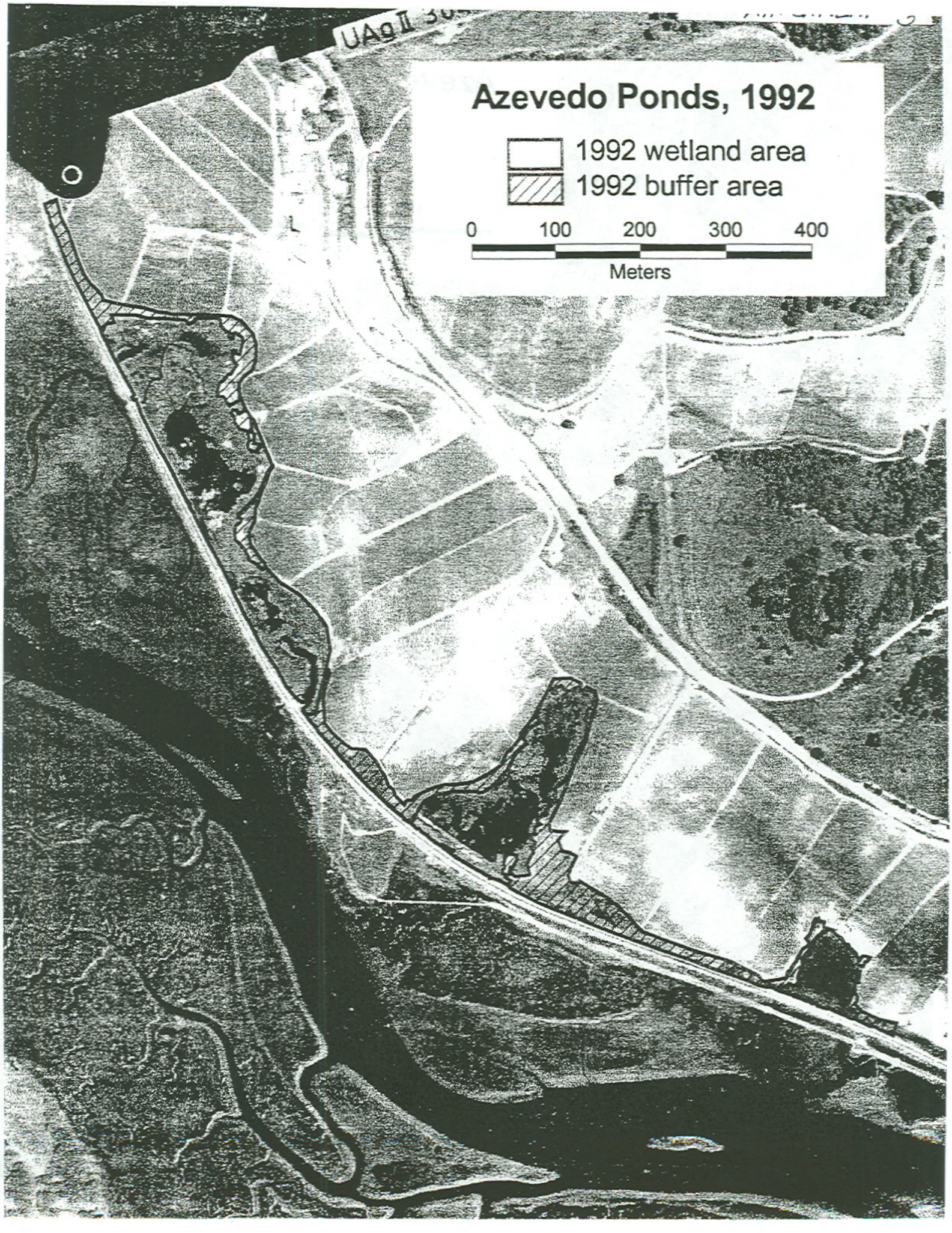
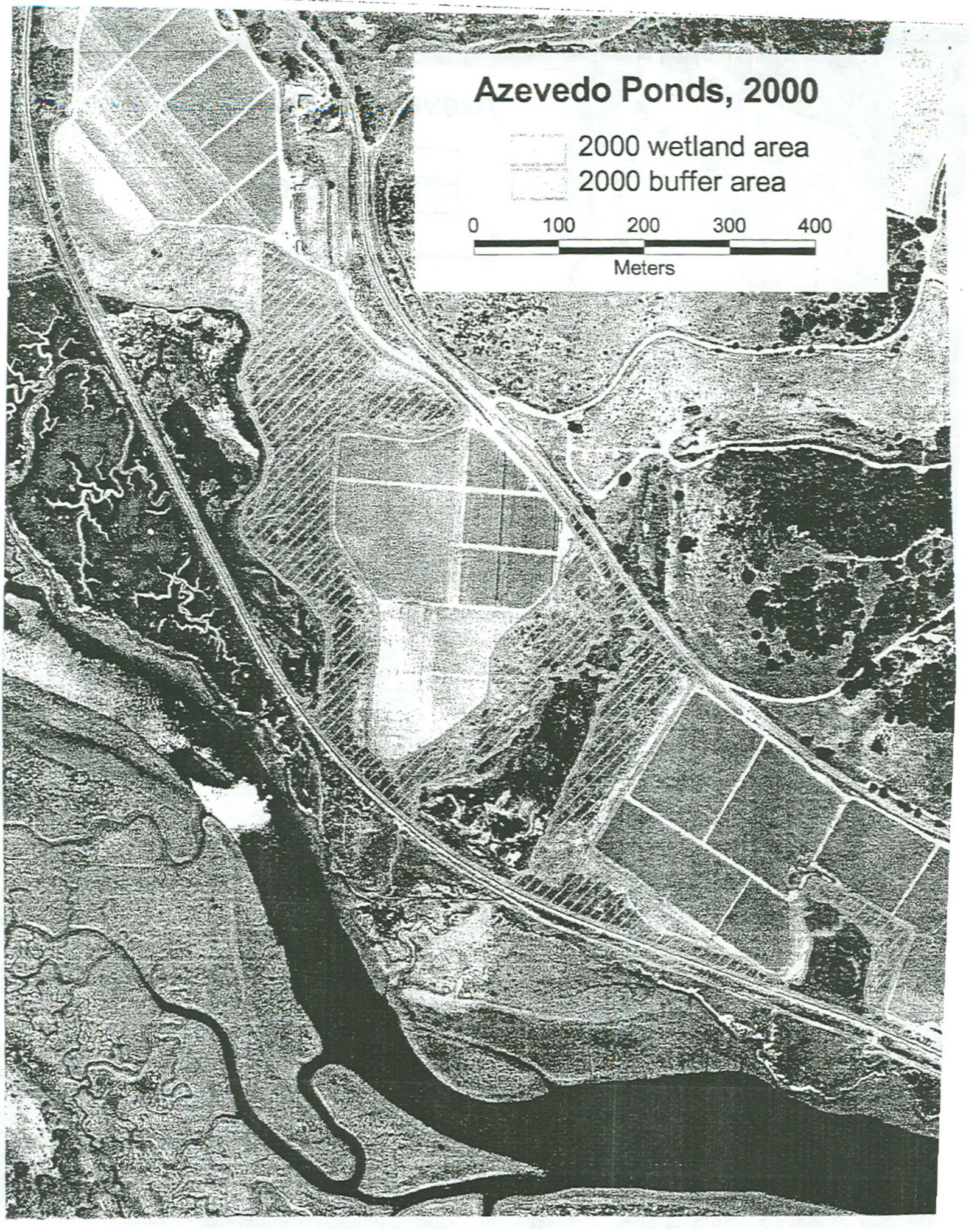
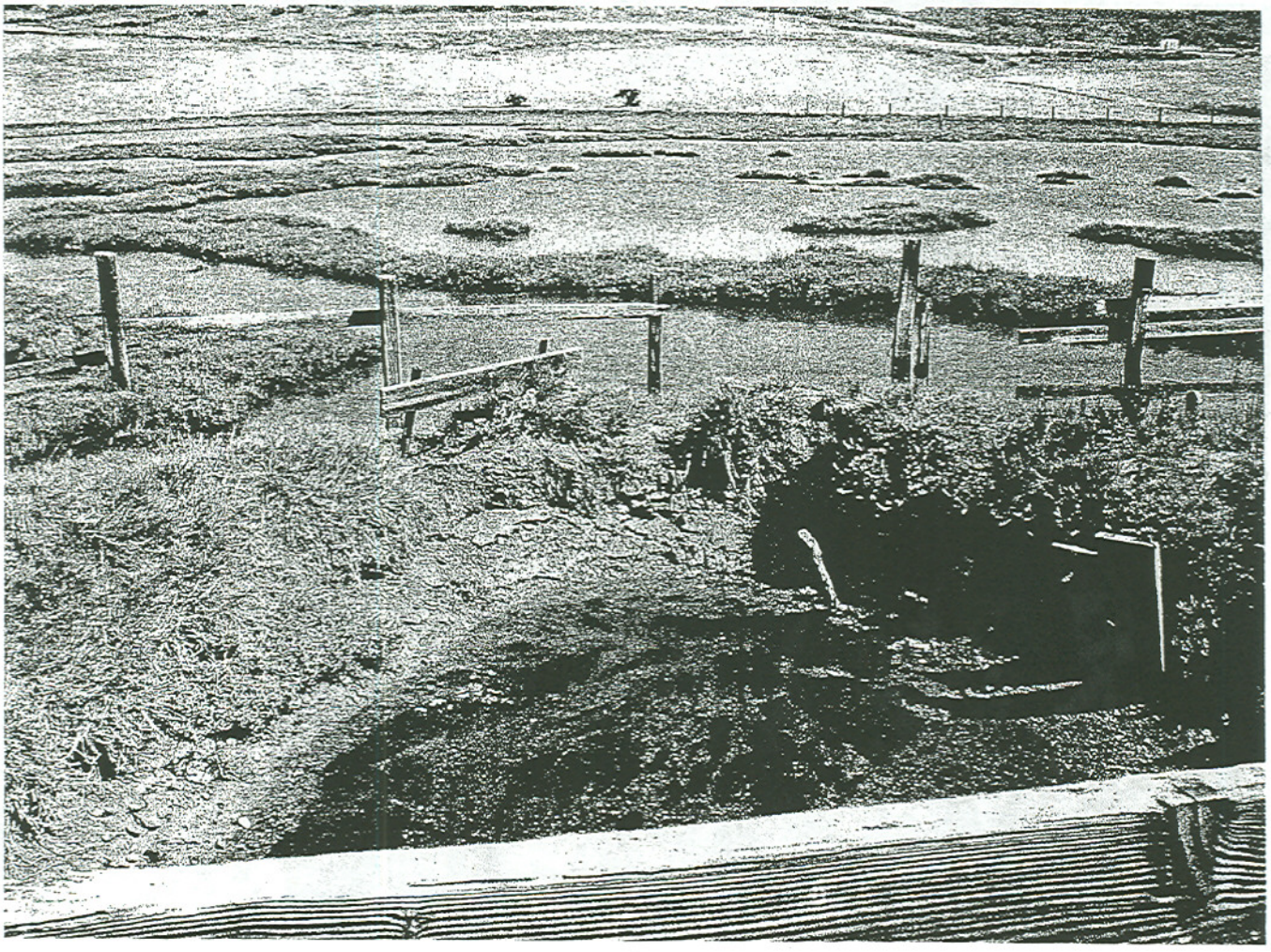
TRIVELPO
RANCH
#3
#2
#1

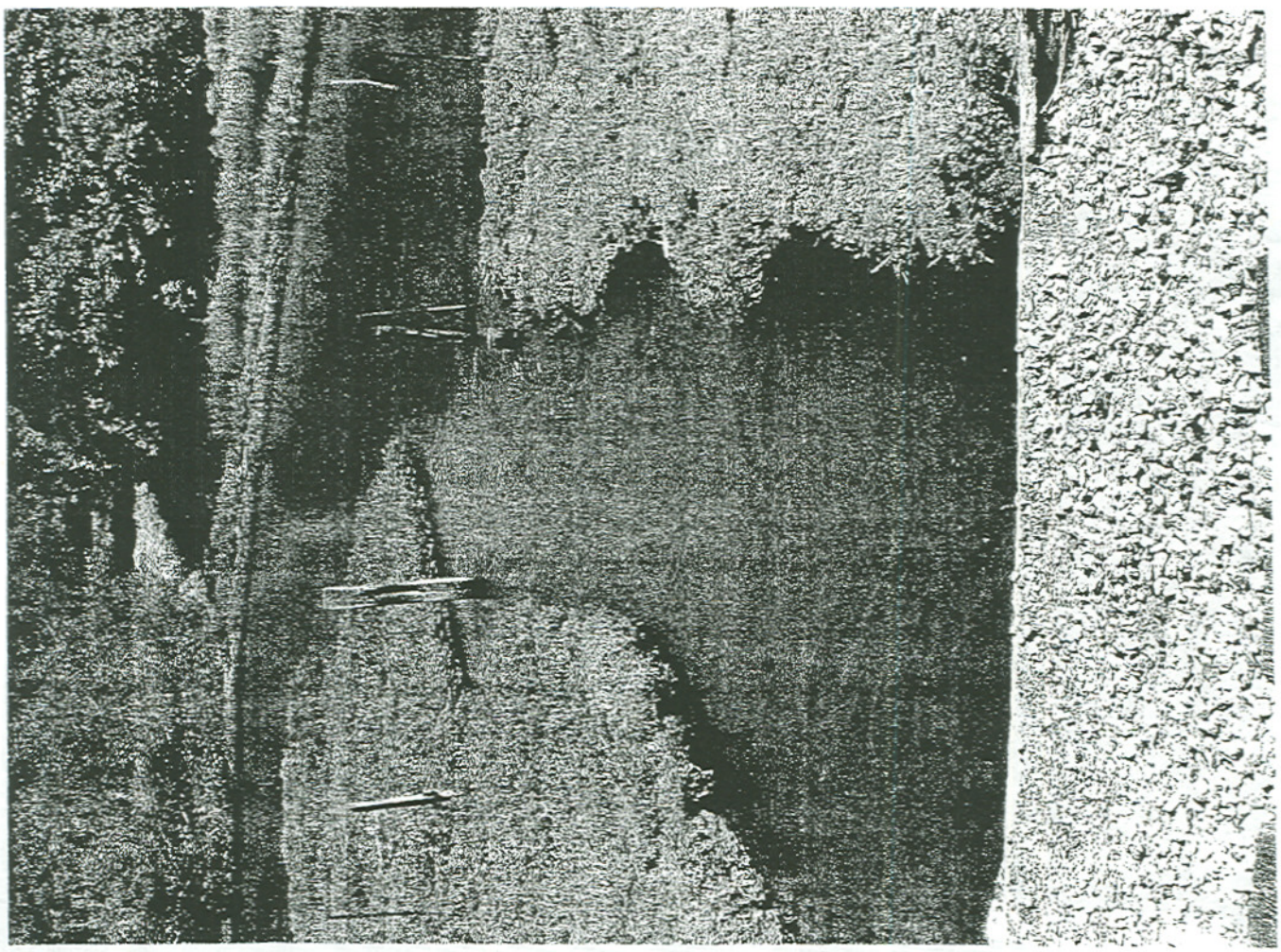

Azevedo Ponds, 1992
1992 wetland area
1992 buffer area
0
100
200
300
400
Meters


Azevedo Ponds, 2000
2000 wetland area
2000 buffer area
0
100
200
300
400
Meters

ATTACHMENT #.5



ATTACHMENT 6



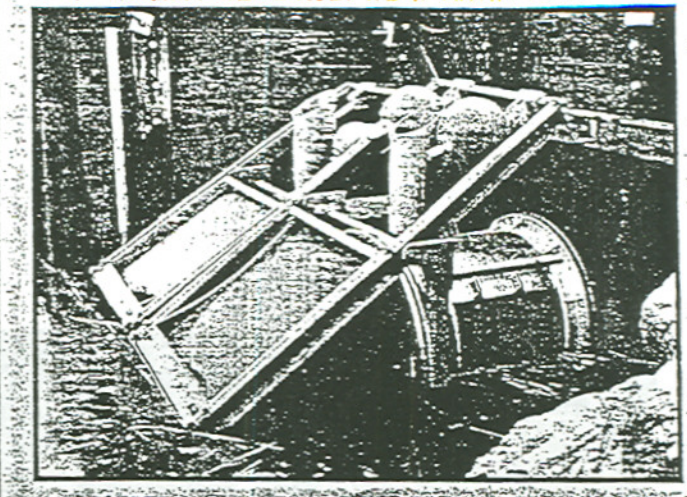
ATTACHMENT 7

WATERMAN/NEKTON

SRT (SELF-REGULATING TIDEGATE)

FOR TIDAL WETLANDS PRESERVATION & RESTORATION

- RESTORES TIDAL FLUSHING OF MARSHES WITHOUT FLOODING OF UPLAND PROPERTY BEHIND DIKES AND LEVEES
- RESTORATION OF ESTUARINE PLANTS, FISH, SHELLFISH, WATERFOWL & WILDLIFE
- REDUCES MOSQUITO BREEDING THROUGH NATURAL CONTROL
- HELPS ELIMINATE MARSH FIRES (BOTH PEAT AND PHRAGMITES OR TALL REED GRASS)
- REDUCES SHEET FLOODING OF THE MARSH
- DEEPENING OF DOWNSTREAM CHANNELS RESULTING IN IMPROVED NAVIGATION
- PROVEN BY 20 YEARS EXPERIENCE



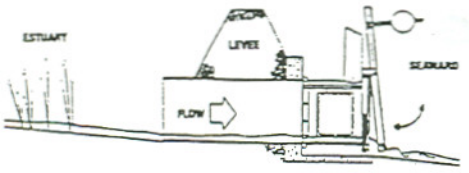
The SRT is usually attached to an end wall or cross-culvert on the tidal side of a causeway or dike. The buoyant SRT is hinged on the top of the culvert so that it floats on the surface of the water until it is closed by counterfloats extending above and behind the hinge point. The position of the counterfloats on the arms is adjusted to meet the required gate closure water levels on a site-specific basis. Once the predetermined high water level is achieved, the SRT automatically closes and stays closed during the flood event, thereby protecting the flood prone area. Once the tide recedes on the outside of the dike the hydraulic head reverses in the culvert and the SRT automatically reopens thereby allowing any water to flow out of the flood protection drainage system. The SRT stays open, floating on the rising and falling tide as the water flows in and out, until such time as the elevation of the tide water reaches the user set gate closure level. Depending on the float settings, the SRT could close with every daily tide or it could just rise and fall with the tide for months or even years closing only during hurricane flood events. It all depends on the goals of the water management agency which adjusts the float settings.

The SRT always allows upland stormwater runoff and creek water to discharge when the tide is low. The conventional one-way gate closes when the tide rises, thereby preventing saltwater from returning to the diked watercourse or wetland. In contrast, the SRT can be adjusted to allow tide water to flow into the culvert thereby feeding the channel or marsh behind the dike. Because the SRT is located on the outfall or tidal side of the dike's culvert, its float system responds to any tidal threat by closing the gate to incoming water when the tide reaches the design high water level. Sensing the storm tide water elevation, the SRT closes "early" thereby preserving a relatively large volume of potential water storage capacity behind the dike should it be needed for detention of upland runoff associated with the coastal storm. In this way the SRT simultaneously maintains flood protection to the upland area while allowing tidal flushing of the low-lying wetlands.

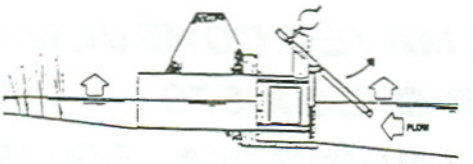
Restored tidal flushing of the wetlands will help restore the estuarine ecosystem; eliminate marsh fires (both dry peat fires, phragmites or tall reed grass fires), greatly reduce mosquito breeding, reduce sheet-flooding of the marsh; and restore upland drainage through re-scoured marsh channels. Because of the increased tidal prism to the restored wetland, deepening of the downstream channel and improved navigation will result as well.

Waterman® INDUSTRIES, INC.

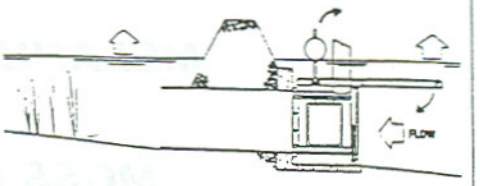
SRT IN NORMAL TIDE SEQUENCE



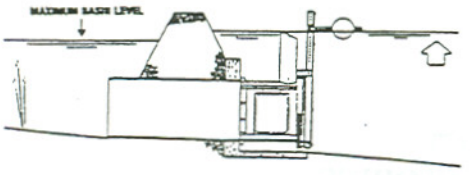
1. SRT ACTING AS NORMAL FLAP GATE ALLOWING ESTUARY DRAINAGE



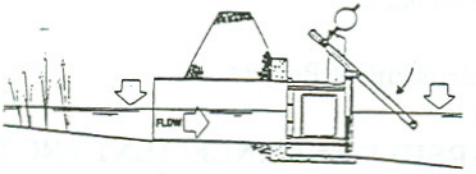
2. RISING TIDE FLOATS GATE UP ALLOWING INCOMING TIDE TO FLOOD ESTUARY BASIN



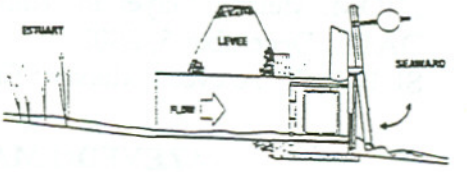
3. TIDE BEGINS TO CLOSE GATE LIMITING ESTUARY FLOOD LEVEL



4. NORMAL HIGH TIDE GATE FULLY CLOSED

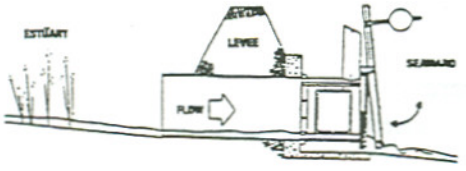


5. COVER FLOATING ON FALLING TIDE LOWERS ESTUARY FLOOD LEVEL

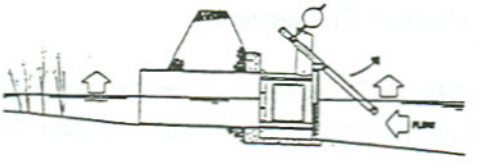


6. GATE ACTING AS NORMAL FLAP ESTUARY DRAINAGE RESUMES

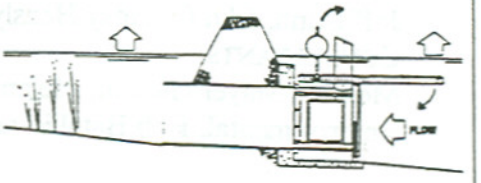
SRT IN STORM SEQUENCE*



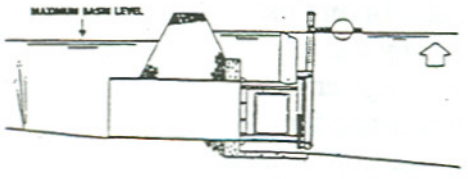
1. GATE ACTING AS NORMAL FLAP ALLOWING ESTUARY DRAINAGE



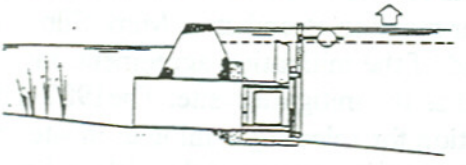
2. RISING TIDE FLOATS GATE UP FLOODING ESTUARY BASIN



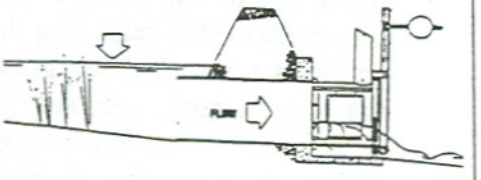
3. TIDE STARTS TO CLOSE GATE LIMITING ESTUARY FLOOD LEVEL



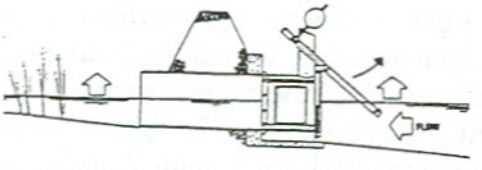
4. AT NORMAL TIDE LEVEL GATE IS CLOSED



5. WHEN TIDE EXCEEDS NORMAL HIGH TIDE LEVEL, GATE LOCKS IN CLOSED POSITION TO PREVENT GATE ACTION DUE TO SURGES



6. RECEDING TIDE - SIDE FLAPS OPEN TO ALLOW DRAINAGE OF ESTUARY - MAIN GATE COVER RESTRICTED TO PARTIALLY OPEN UNTIL NEXT TIDE



7. NEXT INCOMING TIDE - GATE UNLOCKS & RESUMES NORMAL TIDE SEQUENCE

* Note that a maximum level is not exceeded on the estuary side of SRT during any phase or condition.

MELANIE MAYER CONSULTING
P.O. BOX 570
MOSS LANDING, CA 95039

-MEMO-

TO: Invitees to the December 2 Signatories Meeting
FROM: Melanie Mayer and Kim Tschantz
DATE: December 5, 2002
SUBJECT: Azevedo Marshes Enhancement Project

AZEVEDO MARSHES ENHANCEMENT PROJECT
MEETING OF THE MITIGATION AGREEMENT SIGNATORIES
DECEMBER 2, 2002
MEETING SUMMARY

MEETING ATTENDEES
AGENCY REPRESENTATIVES:
Mark Silberstein, Elkhorn Slough Foundation, Brian Foss, Santa Cruz Harbor District, Jeff Cann, CDFG, Patsy Heasly, Coastal Conservancy
CONSULTANTS:
Melanie Mayer Gideon, Melanie Mayer Consulting, Kim Tschantz, Cypress Environmental, Bob Batallio and Ann Borganovo, Phillip Williams Associates

BACKGROUND
The meeting began at 10:15 A.M.at the Elkhorn Slough Estuarine Research Reserve Center with Kim Tschantz informing the group that Darrin Thome of USFWS could not attend due to scheduling conflicts and no word had been received from Coastal Commission staff regarding their meeting attendance. Mark Silberstein and Brian Foss provided a historical background of the mitigation agreement, including why the Azevedo Marshes were selected as the mitigation site. The1987 mitigation agreement included a four-tiered prioritization for selecting a mitigation site to compensate for impacts from constructing the Santa Cruz upper yacht harbor. Brian agreed to prepare a short summary explaining why the Azevedo Marshes were selected rather than sites in Santa Cruz County as the mitigation location. This will be sent to Kim.

PERMITTING
Kim and Melanie explained that an Encroachment Permit must be obtained from Union Pacific Rail Road to enter their right-of-way to perform the work and permits must be obtained from several governmental agencies. Permit applications will be made once more refined plans are prepared for each of the project's three work sites. Kim and Mark met with Cheryl Lambert of NRCS on November 22, 2002 to discuss the project and its qualification for permitting through the Elkhorn Slough Watershed Permit Coordination

Program. This program provides an alternative to making applications to several local, State, regional and federal agencies by requiring only a single application made through the NRCS office for certain classifications of projects. It is very likely that the project will qualify for permitting through the program. Kim and Mark will provide NRCS with a written description of the project before the end of December and NRCS will make a determination in January 2003 regarding the project's qualification for the Program.

Patsy Heasly stated that Coastal Conservancy funding for the project can start once CEQA analysis of the project is completed. She was reminded that the County of Monterey prepared an Initial Study and Negative Declaration for the Elkhorn Slough Wetland Management Plan in 1988. The Plan specifically included the enhancement project for the Azevedo Marshes. Tim Duff of the Coastal Conservancy agreed over a year ago that the CEQA documents prepared by Monterey County applied to the Azevedo Marshes project in its current form and no additional CEQA analysis would be required to meet Coastal Conservancy requirements. Pasty agreed to follow-up on this with her Board and report back to Kim and Mark.

PROJECT DESIGN

Ann Borganovo will be assisting Bob Battalio in design work for the project . The design will be basic, utilizing the earthen berm concept previously used at the work sites but including additional measures to better manage tidal inflow from the slough. As such, the project constitutes a repair of an existing (or previous) improvement at three marsh inlets. Two of the inlets are at the northern marsh. Twenty-four inch diameter corrugated metal pipes (culverts) will be installed through each earthern berm. Float activated flap gates will be installed at each end of the culverts. The floats will automatically open the flap gates up with the rising tide, allowing tidal flow to fill the marshes, but at a certain tide level, the opposite float will force the flap gates closed to prevent additional tidal flow from further inundating the marsh. In addition, an adjustable weir will be installed in the two work site berms in the northern (largest) pond to provide more options for the management of tidal flows.

The existing culverts installed through the UPRR embankment will not be affected. These culverts will continue to provide tidal flows to the marshes in their existing condition.

FIELD VISIT

All meeting attendees visited the mitigation sites as a group. Mark began by showing how row crop cultivation had been pulled back 100 feet from each of the three Azevedo Marshes as the first step towards creating more wetland habitat at these sites. Slides taken four years ago showed crop cultivation down to the dry season edge of the wetland. There will not be a need to construct any improvements at the center marsh. Minor repair will occur at the single inlet to the southern marsh and more substantial repair will occur a the two inlets to the northern marsh. Everyone agreed that the design techniques discussed at the meeting would be applicable to the environmental conditions at the marsh inlets. A minor amount of pickleweed habitat will be removed to reconstruct the berms and re-dig

the channel that feeds the southern marsh. Jeff Cann expressed that the project should address this by describing how the minor loss of this habitat will be mitigated.

Dewatering during construction will be necessary; however, the tidal fluctuation of the slough and the embankment for the railroad greatly facilitate this. Sand bags can be easily installed at the culvert openings under the railroad tracks at low tide. This will prevent tidal flow from inundating the marshes and their inlets when the tide rises again. When the work is completed, the sand bags will be removed.

TASKS TO BE ACCOMPLISHED

1. Brian Foss to prepare short summary on the process used to select the Azevedo Marshes as the mitigation site.
2. Kim and Mark to prepare a written description of the project for NRCS including the attributes of the project that make it qualify for the Elkhorn Slough Watershed Permit Coordination and Streamlining Program
3. Patsy to review her agency's files on this project and present the concept of the project to her Board. She will also advise the Board on the CEQA analysis that has occurred to date and ask them to make a determination that the CEQA analysis is either adequate or if additional CEQA analysis is required. She will supply Kim and Mark with written documentation of the Board's determination.
4. Kim will contact USFWS and Coastal Commission staff to summarize the main points of this meeting and determine if either agency has any issues.

REVIEW AND COMMENT

Please contact Kim Tschantz before December 10th if any of the information in this summary is different than your understanding of what occurred at our meeting. Kim can be contacted by phone at: (831) 685-1007 or e-mail at: kimt@cypressenv.com.

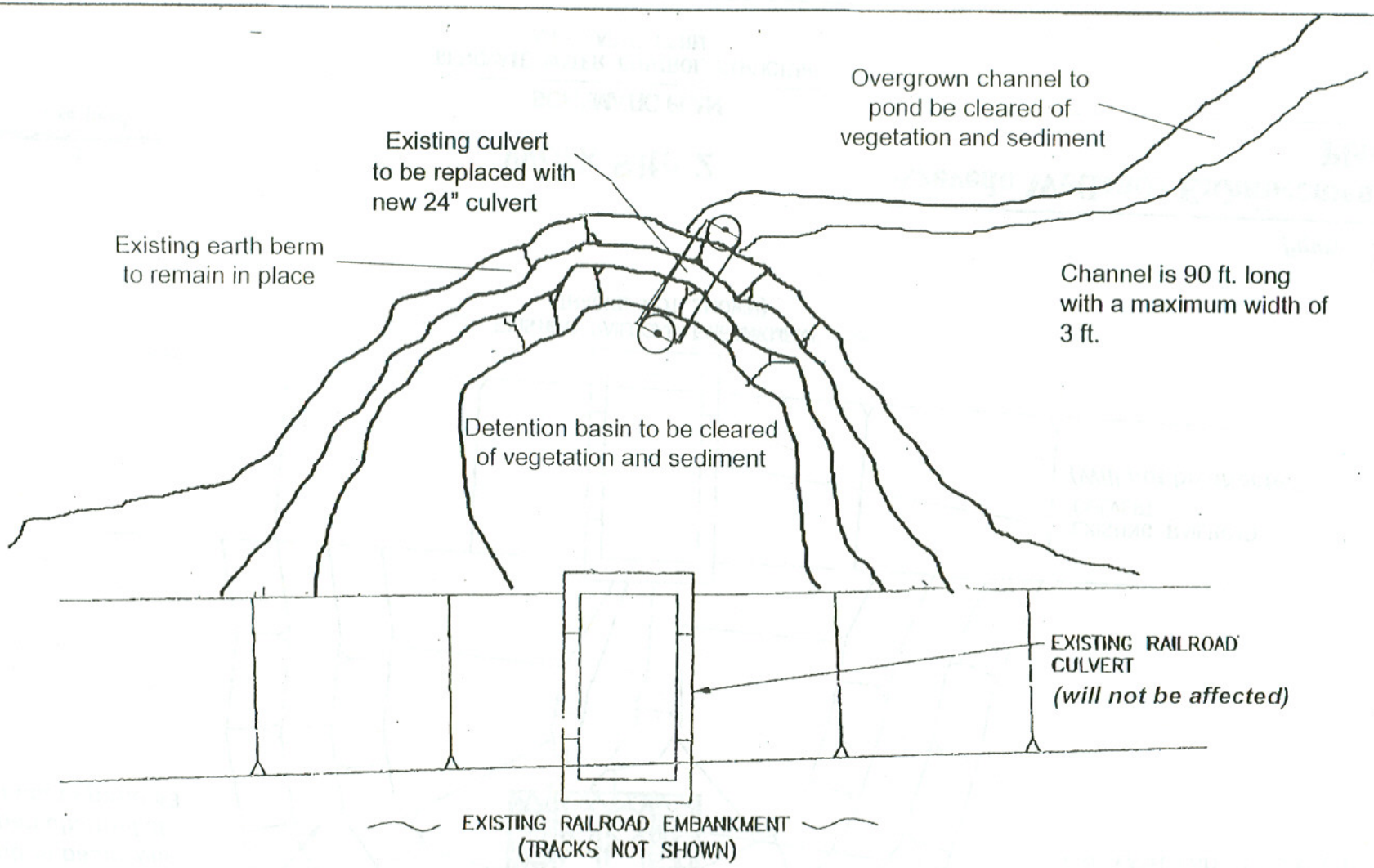


figure 1

0 6 12

Scale (feet)

Work Site 1

SCHEMATIC PLAN

Clean out detention basin and channel to pond #1

Azevedo Wetlands Enhancement Plan

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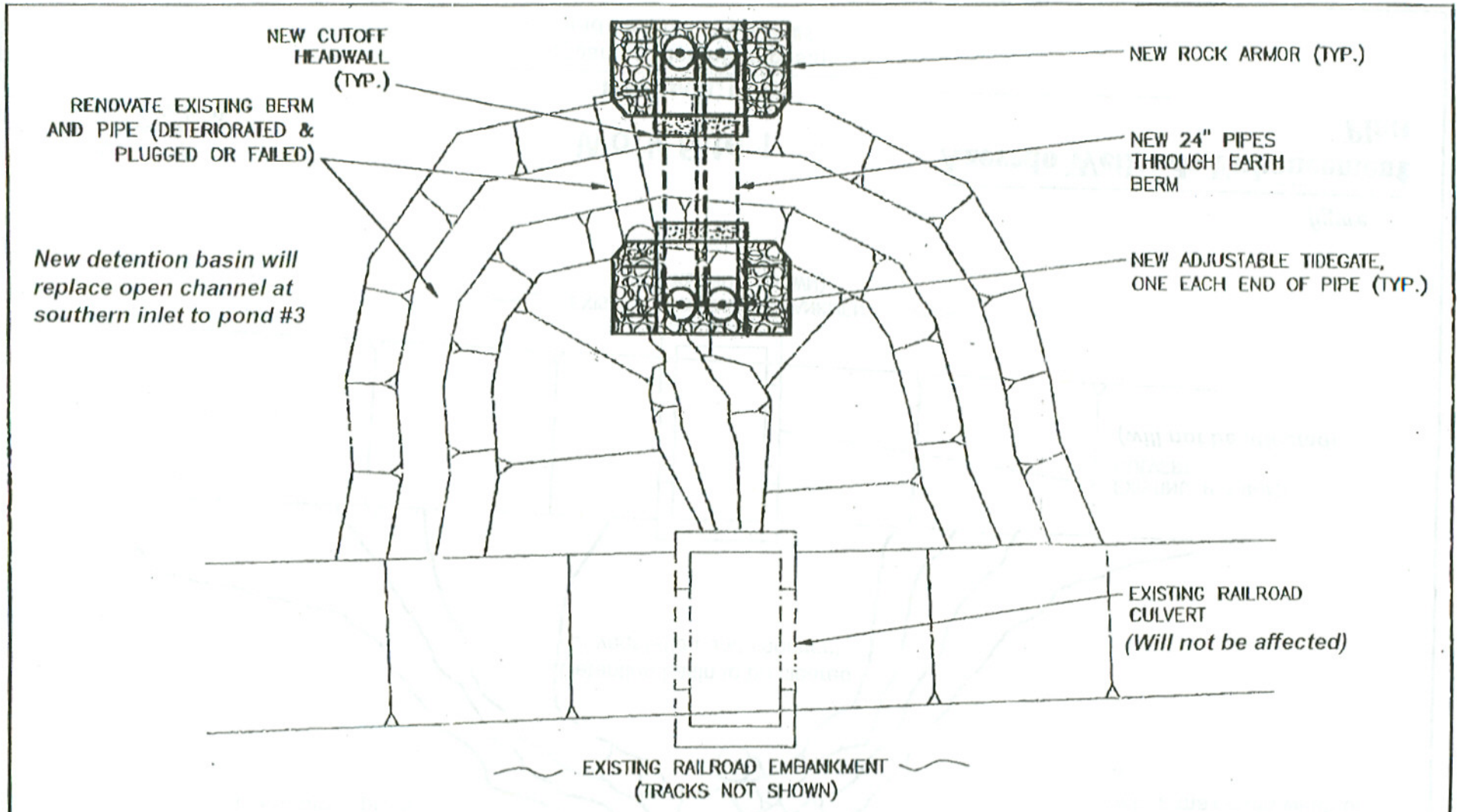

figure 2

Azevedo Wetlands Enhancement Plan

0 5 10
Scale (feet)

Work Site 2

SCHEMATIC PLAN

RENOVATE WATER CONTROL STRUCTURE AND EARTH BERM

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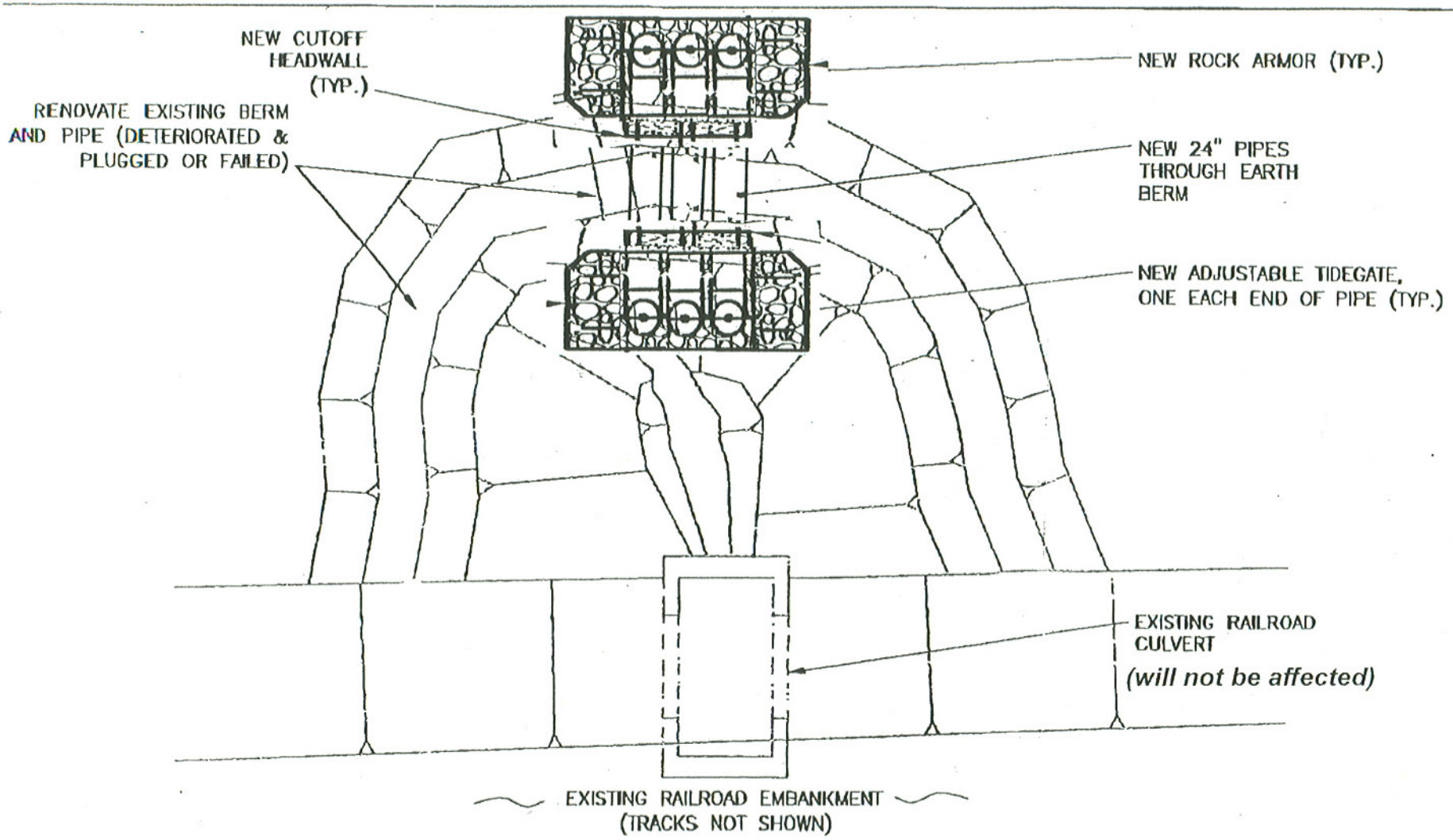

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Scale (feet)

figure 3

Work Site 3

SCHEMATIC PLAN

RENOVATE WATER CONTROL STRUCTURE AND EARTH BERM

Azevedo Wetlands Enhancement Plan